CUMULATIVE SUBJECT INDEX FOR VOLUMES 110-117*

Α A9145C antifungal antibiotic from Streptomyces griseolus, 1-aminocyclopropan-carboxylic acid syn-thesis inhibition (tomato fruit extracts), 113, 586 2',5'-A, see Oligoadenylic acid ppp(A2'p) A-synthetase, see $2', \overline{5}'-0$ ligoadenylate synthetase (3'dA2'p)23'dA cordycepin analog, cordycepin prodrug (human colon), 115, 137 Acetaldehyde aerobic oxidation by xanthine oxidase, leukotriene inactivation by generated hydroxyl radicals, 110, 266 -exposed erythrocytes from normal individuals, hemoglobin A_I fraction similarity to that in alcoholism, 113, 1004 metabolism, effect on Ca2+ transport (rat liver mitochondria), 117, 169 Acetaminophen -glutathione conjugate, cytochrome P-450-dependent formation (Tethanol-treated rabbits), <u>112</u>, 8 Acetic anhydride F₁-ATPase subunit labeling, activating and inactivating ligand_effects (bovine heart), <u>113</u>, 273 Acetobacteria spermine synthesis by GTP-insensitive ornithine decarboxylase, 114, 779 Acetylcholine binding sites, α -subunit receptor, exobilayer portion model, 116, 17 noncompetitive antagonists, binding sites in a-subunit receptor, exobilayer portion model, 116, 17

Acetylcholine receptor

sites, <u>116</u>, 17

a-subunit, exobilayer portion,

molecular model and binding

exposure to lipid bilayer membrane

(Torpedo californica), 115, 1075

interaction with monoclonal antibodies to human acetylcholine receptor (human, mouse), 113, 1 binding site loss with ATP due to orthovanadate contamination (rat corpus striatum), 110, 567 cAMP synthesis regulation, adrenocorticotropin secretion, and adenvlate cyclase activity (murine pituitary tumor cells), 114, 289 quinuclidinyl benzilate binding regulation by quanine nucleotide, Tris/choline allosteric site requirement (canine, frog, murine, rat heart), 113, 280 stimulation by monovalent cations and guanine nucleotides, N-ethyl-maleimide pretreatment effect (chicken heart), 111, 41; erratum, 112, 348 solubilization by 3-[(3-cholamidopropyl)dimethylammonio]-1-propane sulfonate, glycoprotein nature (bovine cerebral cortex). 115. 814 in sensitive form for GTP and Na⁺ (bovine cerebral cortex), 112, 948 nicotinic desensitized azidophencyclidine binding with carbamylcholine (Torpedo californica, T. marmorata, T. ocellata, 113, 723 partial tertiary structure, single group rotation theory, 111, 1022 Acetylčholinesterase S-mercuric-N-dansylcysteine binding, stoichiometric reaction and modification (Torpedo californica), Acetyl CoA carboxylase phosphorylation by ATP-citrate lyase kinase and cAMP-dependent protein kinase (rat liver), 117, 435 regulation by insulin-induced low-molecularweight mediators released from plasma membranes (rat liver

*Underscored numbers indicate the appropriate volumes; numbers without underscores indicate pagination.

114, 897

Subject Index

```
cytosol), 110, 789
                                                4'-(9-Acridinylamino)methanesulfon-m-
                                                       anisidide
    phosphorylation-dephosphorylation
                                                  aldehyde oxidase inhibition (rabbit
      mechanism (chick liver), 116, 633
                                                       liver), 116, 759
N-Acetylglucosaminidase
                                                m<sub>R</sub>-Acrosin
  signal-induced release, protein
      kinase role (rabbit platelets,
                                                  activity, a1-proteinase inhibitor
      rat neutrophils), 116, 743
                                                       and sulphated polysaccharide
                                                       effects (ovine), \underline{117}, 319
B-N-Acetyl-D-glucosaminidase
  binding to brain protein by phos-
                                                ACTH (adrenocorticotrophic hormone),
                                                       see Adrenocorticotropin
      phomannan-Sepharose chroma-
                                                Actin
      tography (Macaca radiata), 112,
                                                  Ca^{2+} and Mg^{2+}, polymerization
                                                       characteristics, 116, 478
  inhibition by cytokine injection (rat
                                                  cytoskeleton, change following
      liver), <u>112</u>, 14
                                                       chemotactic stimulation of Dic-
  secretion by
                                                       tyostelium discoideum, 115, 351
    macrophages, zymosan-induced,
                                                  G-, crosslinked trimer preparation,
      mannose-glycoprotein receptor
                                                       purification, and properties
      role (mouse), <u>113</u>, 192
                                                       (rabbit skeletal muscle), 111, 404
    platelets, parallel with polyphos-
                                                  non-polysomal mRNA translation
      phoinositide increase after
                                                       product from sarcoma-180 ascites
      thrombin stimulation (human),
                                                       cells during cell cycle (mouse).
      110, 660
                                                       113, 923
N-Acetyl-L-glutamate
                                                  polymerization
  binding to elastase-inactivated
                                                     spectrin-actin complex crosslinking
      carbamoyl-phosphate synthetase (ammonia) (rat liver), 117, 238
                                                       by band 4.1 effect (human eryth-
                                                       rocytes), <u>111</u>, 360
β-N-Acetylhexosaminidase, <u>see</u> β-<u>N</u>-
                                                     stimulation by protein isolated
      Acetyl-D-glucosaminidase
                                                       from bovine thyroid plasma mem-
Acetylhydrolase
                                                       branes, 111, 415
  plasma, platelet-activating factor
                                                  purification and characterization
       inactivation (rat), <u>113</u>, 666
                                                       (rat pancreas), <u>113</u>, 163
N-Acetyl-D-mannosamine
  conversion from N-acetylneuraminic
                                                Actinomycin
      acid by N-acetylneuraminate pyru-
vate-lyase, configuration (Clos-
                                                  prevention of insulin stimulatory
                                                       effect on carbamoyl-phosphate
tridium perfringens), 111, 668
N-Acetyl-muramyl-L-alanyl-D-isoglutamine
                                                       synthetase (rat diabetic liver),
                                                       114, 255
  effect on sheep erythrocyte immune
                                                Actinomycin D
      response in macrophage-depleted
                                                   inhibition of carbon tetrachloride-
      cultures (mouse), 114, 721
                                                       induced choline kinase (rat
N-Acetylneuraminate lyase
                                                       hepatic cytosol), 111, 683
  N-acetylneuraminic acid \alpha- and
                                                Action potentials
       β-anomer substrates, kinetics
                                                  production, intracellular pressure
       (Clostridium perfringens), 111,
                                                       change (squid giant axon), 114,
                                                       1006
N-Acetylneuraminate pyruvate-lyase, see
                                                Actomyosin
       N-Acetylneuraminate lyase
                                                  native, phosphorylation modulation by
N-Acetylneuraminic acid
                                                       spontaneously active phosphatase (bovine aorta), <u>111</u>, 906
  \alpha- and \beta-anomers, substrates for
       N-acetylneuraminate pyruvate-
                                                Acute phase response
       lyase, kinetics (<u>Clostridium per</u>-
<u>fringens</u>), <u>111</u>, 668
                                                   induction by cytokine injection from
                                                       peritoneal exudate cells (rat),
                                                       112, 14
N-Acetyl-puromycin
  converted from puromycin by enzyme
                                                Acyclovir
       isolated from drug-producing
                                                   and 2'-nor-2'-deoxyguanosine, uptake
       Streptomyces alboniger, biologi-
                                                       and phosphorylation in tissue
       cal activity, 113, 772
                                                       culture, in vitro viral and cell-
                                                       ular DNA polymerase inhibition
  secretion, leukotriene stimulated
                                                       kinetics (rabbit kidney), 116, 360
       (rabbit gastric parietal cells),
                                                 Acyl-carrier protein
```

isolated from citrate lyase, S-acyl-

```
adenosine (avian sarcoma virus-
       ated residue properties
(Klebsiella aerogenes), 114, 310
Acyl-CoA:1-acyl-sn-glycero-3-phospho-
                                                           transformed rat cells), 114, 214
                                                    S-Adenosylmethionine
       lipid acyltransferase, <u>see</u>
1-Acylglycerophosphate <u>acy</u>l-
                                                      DNA methylation inhibition (avian
                                                           sarcoma virus-transformed rat
       transferase
                                                           cells), 114, 214
                                                      effect on Ca<sup>2+</sup> permeability in proteo-
Acy1-CoA dehydrogenase (NADP<sup>+</sup>)
       trans-2-enoyl-CoA reduction,
                                                           liposomes (chicken erythrocyte
       kinetics (rat hepatic
                                                          membrane proteins), 114, 1126
       microsomes), 113, 659
Acyl-CoA desaturase
                                                        5'-deoxy-5'-methylthioadenosine
  \Delta^6-, immunochemical differentiation from \Delta^9- and \Delta^5-types
                                                           (avian sarcoma virus-transformed
                                                          rat cells), 114, 214
                                                      phosphatidylethanolamine methylation
       (rat hepatic microsomes), 110, 36
                                                          mediation
1-Acylglycerophosphate acyltransferase
                                                        GTP effects (rat hepatic plasma
   arachidonic acid transfer to lyso-
                                                          membrane), 114, 425
       phospholipids, relative rates and localization (rat pancreatic
                                                        inhibition by endogenous inhibitors
       acini), <u>112</u>, 502
                                                           in hepatic cytosol (rat), 112, 108
Acyl-lyase
                                                   Adenosylmethionine decarboxylase
                                                      hyperoxia-induced delayed stimulation (rat lung), \frac{113}{491}, \frac{491}{1000} inhibition by 3-\frac{1}{400}
  citrate lyase subunit activity,
       single arginine residue at active
       site (Klebsiella aerogenes), 111,
       490
                                                          mycin (Hela cells), 114, 505
Acyl-transferase
                                                   Adenovirus type 2
  citrate lyase subunit activity,
                                                      proteins, trimeric nature of penton
       single arginine residue at active
                                                          base and fiber, 110, 913
       site (Klebsiella aerogenes), 111,
                                                   Adenovirus type 5
       490
                                                      DNA synthesis <u>in vitro</u>, inhibition by
  role in phosphatidylglycerol bio-
                                                           aphidicolin, 113, 87
       synthesis (canine lung micro-
                                                    Adenylate
       somes), <u>116</u>, 23
                                                      energy charge
Adenine nucleotides
                                                        effect on 6-phosphofructokinase
  effect on F<sub>1</sub>-ATPase activity, mechanism (bovine heart), <u>113</u>, 273
                                                           activity, NHI and AMP de-
                                                           aminase regulatory roles (perme-
  mitochondrial membrane potential restoration with Mg<sup>2+</sup>, poten-
                                                           abilized Saccharomyces cerevi-
                                                          siae), 112, 96
       tiation by bongkrekaté (rat
liver), <u>111</u>, 792
                                                        pyruvate, orthophosphate dikinase
                                                          activation/deactivation control,
Adenine nucleotide translocase
                                                          pyruvate, oxamate, and oxalate
   inhibition by atractyloside, effect
                                                          effects (Zea mays chloroplasts),
       on adenosine release from cardiac
                                                          115, 673
       mitochondria (rat), 113, 990
                                                   Adenylate cyclase
Adenocorticotropin
                                                      basal, inhibition by GTP or guanyl-
  NH<sub>2</sub>-terminal sequences, brain syn-
                                                          5'-yl imido-diphosphate,
       aptic membrane peptidase action
                                                          pertussis toxin effect (rat adi-
        (rat), 111, 259
                                                          pocytes), <u>116</u>, 651
Adenosine
                                                      -coupled adenosine receptors.
                                                          detection in ventricular mem-
  release by cardiac mitochondria,
       adenine nucleotide translocase
                                                          branes (guinea pig heart), 110,
       and ATP/ADP ratio roles (rat),
       <u>113</u>, 990
                                                      forskolin-stimulated
Adenosine receptors
                                                        enkephalin-mediated inhibition
                                                          (rabbit corpus luteum), <u>116</u>, 574
  adenylate cyclase-coupled, detection
                                                        inhibition by GTP or \frac{1}{5} -yl
       in ventricular membranes (guinea
                                                          imido-diphosphate, pertussis
       pig heart), <u>110</u>, 208
                                                          toxin effect (rat adipocytes),
S-Adenosylhomocysteine
                                                          <u>116</u>, 651
  DNA methylation inhibition (avian
                                                        reversal by carbachol, cholinergic
       sarcoma virus-transformed rat
                                                          muscarinic receptor role (murine
       cells), 114, 214
  effect on 5'-deoxy-5'-methylthio-
                                                          pituitary tumor cells), 114, 289
```

inhibition

monary artery, rat aorta), 112,

```
by monoclonal antibodies
    (Neurospora crassa), 113, 778 sodium fluoride effect (canine,
                                                 ADP/ATP translocator protein
                                                   synthesis and intracellular transport
      rabbit, rat heart sarcolemma), 115, 583
                                                        (rat intact hepatoma cells), 110,
  negative coupling with angiotension
                                                 Adrenalectomy
       II receptors (rat aorta), 117, 420
                                                   effect on lipogenic testicular
  regulation by catalytic component phosphorylation and dephosphory-
                                                        enzymes (rat), <u>115</u>, 606
                                                 a-Adrenergic receptors
       lation (S49 murine lymphoma
                                                   and epinephrine, effect on cortico-
       cells), <u>11</u>2, 250
                                                        tropin-releasing factor-induced
  stimulation
                                                        adrenocorticotropin release in
    by L-isoproterenol without
                                                        vitro (rat pituitary cells), 110,
                                                       456
       affecting membrane phospholipid
       methylation (myogenic cell
                                                 a<sub>1</sub>-Adrenergic receptors
                                                   covalent labeling by 4-amino-6,7- dimethoxy-2[4-[5(3-[^{125}I]iodo-4-
       lines), <u>114</u>, 339
     in platelets causing prevention of
                                                        azidophenyl)pentanoyl]-1-pipera-
       thrombin-induced increase in cytoplasmic Ca<sup>2+</sup> (human), <u>113</u>,
                                                        zinyl]quinazoline (rat cerebral
                                                        cortex), 115, 946
     by serotonin and guanine nucleo-
                                                 α<sub>2</sub>-Adrenergic receptors
       tides, inhibition by aluminum
                                                   size determination (human platelets),
       chloride (Fasciola hepatica),
                                                 116, 1070

B-Adrenergic receptors
       112, 911
     by sodium fluoride, enhancement by
                                                   Ca2+-dependency in endocytosis,
       aluminum chloride (Fasciola hepa-
                                                        hexose, and amino acid transport
       tica), 112, 911
                                                        stimulátion (murine renal
                                                        cortex), <u>114</u>, 913
Adenylate kinase
                                                   heterogeneity in lung membranes.
  inhibition by elemental sulfur,
                                                        protease inhibitor effect (ham-
      reversal by dithiothreitol
                                                        ster, rat), 110, 504
       (rabbit muscle), 113, 348
                                                   stimulation by noradrenalin due to
Adenylyl cyclase, see Adenylate cyclase
                                                        increased cAMP level, inhibitory
Adipocytes
                                                        effect on insulin binding to adi-
  insulin binding, inhibition by
                                                        pocytes (rat), 112, 972
      noradrenaline and cAMP due to 8-
                                                   structure, s-mercaptoethanol effect
       adrenergic receptor stimulation
                                                        (mammalian), <u>116</u>, 777
       (rat), <u>112</u>, 972
                                                 β2-Adrenergic receptors
  vanadate insulin-like effect on
                                                   desensitization by pre-exposure to
       glycogen synthase and insulin re-
                                                        isoproterenol, effect on adreno-
       ceptors (rat), <u>113</u>, 80
                                                        corticotropin release (murine
Adipokinetic hormone
                                                        pituitary tumor cells), 111, 112
  lipid mobilization stimulation in
       Manduca sexta (locust), 115, 924
                                                 Adrenocorticotrophic hormone (ACTH).
                                                        see Adrenocortocotropin
ADP (adenosine 5'-diphosphate)
                                                 Adrenocorticotropin
  aggregation induction in gel-filtered
       platelets, inhibition by 4,4'-di-
                                                   corticosterone stimulation, 18-
       isothiocyanostilbene-2,2'-disul-
                                                        hydroxycorticosterone, and
                                                        aldosterone secretion by adre-
       fonate (bovine), 111, 306
                                                        nals, elimination by antisera to
  effect on phosphatidylinositol-4,5-
                                                        γ3-melanotropin (normotensive
       bisphosphate labeling with [32P]phosphate (rabbit plate-lets), 113, 483
                                                        and spontaneously hypertensive
                                                        rats), <u>110</u>, 357
                                                   and B-endorphin, colocalized in
  -ribosylation
                                                        nervous system (rat duodenum),
     nonhistone proteins in HeLa cell
       cycle, 115, 938
                                                        117, 568
                                                   -related peptide, cytotoxic activity, 115, 339
     nuclear protein phosphorylation
       suppression (chicken liver), 113,
                                                   release by pituitary
       136
  vascular prostacyclin synthesis
                                                     corticotropin-releasing factor-
       stimulation (rabbit aorta, pul-
                                                        induced, reduction by cell
```

117, 916

Subject Index

```
pretreatment (rat), 111, 919
                                                Agarose
  epinephrine and corticotropin-
                                                  Cibacron blue F3GA, human heart glyc-
    releasing factor additive effects
                                                       erol-3-phosphate dehydrogenase
    (rat), 110, 456
                                                      modification, 116, 689
  prolonged elevation by isopro-
                                                Aging effects
    terenol pretreatment (murine
                                                  05 induced myelin deterioration
    tumor cells), 111, 112
                                                       in vitro (human brain), 117, 141
  stimulation by
                                                  synaptosomal membrane lipids and
    forskolin, reversal by
                                                      proteins, spin label study (rat
      carbachol, cholinergic mus-
                                                      brain cortex), 117, 688
      carinic receptor role (murine
                                               AH 22216
      tumor cells), <u>114</u>, 289
                                                  gastric histamine H2 receptor
    corticotropin-releasing factor
                                                       inhibition (HGT-1 cells), 116, 251
      analog (rat), 110, 602
                                                D-Alanine
                                                  C-terminal peptide, substrate for
Adrenodoxin
                                                       porcine pituitary amidating en-
  pH effect on reduction potentials.
                                                       zyme, 117, 289
      role in electron transfer mecha-
                                                Alanine aminotransferase
      nism (adrenal mitochondria), 115,
                                                  glucagon effect (murine liver), 115,
      116
Adrenodoxin reductase, <u>see</u> Ferredoxin-
NADP<sup>+</sup> reductase
                                                Alanine-4,5-dioxovalerate aminotrans-
                                                       ferase, see Aminolevulinate
Adriamycin, see Doxorubicin
                                                       aminotransferase
                                                Alanine 2-oxoglutarate aminotrans-
Affinity chromatography
                                                       ferase, <u>see</u> Alanine amino-
  Cibacron 3GA-Sepharose CL 6B, organo-
                                                       transferase
       phosphosphate-hydrolysing phos-
                                                Albumin.
       phatase purification (Alcaligenes
                                                  amyloid precursor variant, identi-
fication (amyloidotic poly-
       NC_5), 110, 412
  colchicine agarose column, tubulin
                                                      neuropathy patient kidney), 116,
       purification (rat pancreas), 111,
                                                  cytosol, production, 5-azacytidine
  on heparin cofactor II, dermatan
                                                      effects (neonatal rat liver),
       sulfate and heparin fractiona-
                                                       116, 939
       tion, 112, 663
  phosphomannan-Sepharose, lysosomal
                                                  effect on oleate binding to hepatic
                                                       sinusoidal membranes in vitro
       enzyme-binding protein isolation
                                                       (rat), <u>112</u>, 88
       (Macaca radiata brain), 112, 398
                                                  serum, <u>see Ser</u>um albumin
  Procion Red-agarose, citrate synthase
                                                Alcaligenes NC<sub>5</sub>
       and succinate thickinase elution
                                                  isolated from soil, organophosphate
       profiles, 112, 1021
                                                       hydrolysing phosphatase purifica-
Aflatoxin B<sub>1</sub>
                                                       tion, 110, 412
  binding and uptake by hepatocytes,
                                                Alcoholism
       inhibition by metyrapone and glu-
                                                  hemoglobin composition changes.
      tathione, stimulation by 1,2-epoxy-3,3,3-trichloropropane
                                                      abnormal A_{\rm I} fraction containing aldehyde or ketone formed during
       (rat), 110, 668
                                                       ethanol metabolism (human), 113,
  conversion from sterigmatocystin in
                                                       1004
      cell-free system (Aspergillus
                                                Alcohols
       <u>parasiticus</u> mutant), <u>116</u>, 1114
                                                  aliphatic, prostatic membrane in
  DNA binding, role of co-oxygenation
                                                       vitro treatment effect on fluidi-
      coupled to arachidonic acid me-
                                                       ty and prolactin binding (rat),
       tabolism (murine embryo fibro-
                                                       113, 220
      blasts), 112, 1034
                                                  formation from sugars, isotope
  induced cytotoxicity
                                                       fractionation quantitation by
    metabolic basis (guinea pig, mouse,
                                                       <sup>2</sup>H NMR, 1<u>11</u>, 890
       quail, rat hepatocytes), 114, 813
                                                  primary, peroxide oxidation to
    miçrosomal enzyme inhibitor effect
                                                       aldehydes by chloride peroxidase.
       (rat hepatocytes), 115, 15
                                                      114, 1104
  -modified DNA: bleomycin and DNase 1
      nucleotide sequence cleavage,
```

Aldehyde oxidase

inhibition by 4'-(9-acridinylamino)-

methanesulfon-m-anisidide (rabbit	H ⁺ ,K ⁺ -ATPase inhibition, acid
liver), <u>116</u> , 7 5 9	secretion (bullfrog, porcine gas-
Aldehydes	tric mucosa), <u>112</u> , 464
peroxide oxidation of primary alco-	Aluminum
hols by chloride peroxidase, <u>114</u> ,	binding to calmodulin, structural
1104	changes induced in calmodulin
Aldolase, <u>see</u> Fructose-bisphosphate	(bovine brain), <u>115</u> , 512
aldolase	Amaranth, see Red dye No. 2
Aldosterone	Amidating enzyme
secretion: angiotension II, 12- <u>0</u> -	converting tripeptides to dipeptide
tetradecanoylphorbol-13-acetate,	amines, substrate specificity
and ionophore A23187 effects	assay (porcine pituitary), <u>112</u> , 372
(porcine adrenal gland), <u>116</u> , 555	Amiloride
Alkaline phosphatase	ethylisopropyl derivative, effect on
hepatic, interacton with Cibacron	Na [†] /H [†] exchange (various cell
Blue P3GA (human), <u>111</u> , 36 inhibition of	types), <u>116</u> , 86
adenylate cyclase activity by cata-	Amine oxidase
lytic component dephosphory-	mixed-function, purification and
lation, 112, 250	activity with carcinogenic amino-
topoisomerase I isolated from	azo dye substrates (rat hepatic
Novikoff hepatoma, 111, 897	microsomes), <u>110</u> , 640
intestinal, binding to Cibacron Blue	Amine oxidases (Cu-containing)
F3GA, chromatographic purifica-	and phenylhydrazine, reaction mecha-
tion (human), <u>111</u> , 36	nism and stoichiometry (bovine
placental	plasma, lentil seedling), <u>115</u> , 841
biosynthesis and processing in	Amine oxidase (flavin-containing)
choriocarcinoma cells and mRNA-	FAD, ESR analysis (bovine liver), 117,
directed cell-free system (hu-	517
man), $\frac{111}{1}$, 611	Amines
purification and partial sequencing	heterocyclic, pyrolysis produced
(human) <u>116</u> , 1076	mutagenic and carcinogenic, ulti-
Alkoxy-aryl-lactams	mate forms (Salmonella typhimuri-
3':5'-cyclic-nucleotide phospho-	um TA98/1.8- DNP ₆), <u>114</u> , 626
diesterase inhibition, tissue and	Amino acid composition
substrate specificity (bovine	adrenocorticotropin-(1-16)-NH ₂ frag-
aorta, human platelets), <u>113</u> , 954 1-0-Alkyl-2-0-acetyl-sn-glycero-3-	ments (rat), <u>111</u> , 259
phosphocholine, see Platelet-	laminin from amnion, chorion, and
activating factor	chorionic microvessel basement
Allergic bronchial asthma	membranes (human), 112 , 1091
leukotriene D ₄ synthesis increase	neural cell adhesion molecule (N-CAM)
in alveolar macrophages (human),	(murine brain), <u>112</u> , 482
111, 518	polysialolyl glycopeptide brain cell surface protein (BSP-2) (mouse),
Alloxan	112, 482
reduction by electron transport	proline-rich polypeptide bound to
proteins (porcine liver micro-	prostatic binding protein, multi-
somes), <u>114</u> , 578	ple forms (rat), 111, 172
Allyl bromide	T-kinin containing bradykinin
chlorination by chloroperoxidase to	sequence (rat plasma), 112, 701
produce halohydrin isomeres,	vasoactive peptide formed from plasma
neighboring group formation, 110 ,	kininogen by action of acid pro-
880	tease from Murphy-Sturm lympho-
Allylisopropylacetamide	sarcoma (rat), <u>112</u> , 621
effect on	D-Amino-acid oxidase
phenobarbital-inducible cytochrome	flavin constituent of purple
P-450 forms (rat hepatic micro- somes), 111, 926	intermediate, resonance Raman
protein synthesis (rat	study (porcine kidney), <u>111</u> , 588 Amino acids
hepatocytes), 114, 612	branched-chain, enzymatic defi-
Allylisothiocyanate	ciencies in fibroblasts.

1983 Cumulative Subject Index

characterization by genetic com-

```
cDNA (human tonsil), 115, 1040 genes (human), 117, 114
      plementation (human), 114, 175
                                                 neuromedin B (porcine spinal cord),
  D-cysteine-related, synthesis by
      3-chloro-D-alanine chloride-lyase
                                                      114, 541
      (Pseudomonas putida CR 1-1), 111,
                                                 neuromedin K (porcine spinal cord),
      809
                                                      114, 533
  effect on 0-(4-methylumbelliferyl)-
                                                 N-terminal,
      alycosides fluorescence, 110, 926
                                                   cellulase, homology with hen egg-
  stimulation of [35S]methionine-
                                                      white lysozyme active site
      labeled short-lived protein de-
                                                      (Schizophyllum commune), 116, 408
      gradation (rat hepatocytes), 117,
                                                    in fluorescein isothiocyanate
                                                      modified cytochrome P-450<sub>LM2</sub>,
      509
  transport, \beta-adrenergic stimulation
                                                      113, 353
      (murine renal cortex), 114, 913
                                                    position 3 post-translational
Amino acid sequences
                                                      modification, 116, 1049
                                                    tyrosine residue of thyroglobulin
  alkaline phosphatase forms (human
                                                      radioiodinated in vivo and in vitro (human), 114, 73
      placenta), 116, 1076
  α-amylase, free thiol group local-
                                                 PCD-109, bovine seminal plasma major
      ization (porcine pancreas), 110,
                                                      protein component, 113, 861
                                                  prealbumin peptides (human amyloid fibril), <u>114</u>, 657
  apolipoprotein A-1
    comparison with proapolipoprotein
      A-I (human plasma), 113, 626
                                                  prostatic steroid-binding protein and
    precursor coded by mRNA (human
                                                      uteroglobin, sequence homology
                                                      (rabbit, rat), 114, 325
      liver), 112, 257
    propreprotein (rat lymph, plasma),
                                                  serine hydroxymethyltransferase.
      116, 704
                                                      homology between prokaryotic and
    propreprotein (Tangier disease
                                                      eukaroytic forms (rabbit liver,
                                                      Escherichia coli), 116, 1007
      patient plasma), 113, 934
  atrial muscle peptide (rat), 117, 859
                                                  sperm activating peptides (Antho-
  cholera toxin subunit À1, ÁDP-
                                                      cidaris crassispina eqq jelly),
      ribosylation site, 116, 341
                                                      117, 147
  high-mobility-group protein HMG 14
                                                  thiol proteinase inhibitor (rat
      (calf thymus and chicken erythro-
                                                      liver), 115, 902
      cytes), <u>110</u>, 378
                                                  thioredoxins, m- and f-type (spinach
  collagenase-derived tryptic peptide
                                                      chloroplast), 115, 1
      containing active site serine
                                                  T-kinin containing bradykinin
      residue (Hypoderma lineatum),
                                                      sequence (rat plasma), 112, 701
      112, 907
                                                  triiodothyronine-containing peptide
  cutinase active site region (fungal),
                                                      isolated from thyroglobulin (por-
      114, 1017
                                                      cine), <u>112</u>, 206
  cytochrome bs (rabbit erythrocytes,
                                                9-Aminoacridine
      liver microsomes), 115, 807
                                                  nitroxide spin-labeled, localization
  cytochrome c oxidase, bacterial and
                                                      in nuclear and mitochondrial DNA
      mitochondrial, sequence homology,
                                                      (KB cells), <u>111</u>, 1074
      11<u>6</u>, 335
                                               Aminoalkylphosphonofluoridates, see
  cyto\overline{c}hrome \underline{c} oxidase subunit IV (bo-
                                                      Phosphonofluoridates
      vine heart), 110, 8
                                               Aminoazo dyes
  endopeptidase II from Vespa
                                                  carcinogenic, N-oxidation by mixed-
      orientalis larvae, bovine chymo-
                                                      function amine oxidase (rat
      trypsin comparison, 110, 1
                                                      hepatic microsomes), 110, 640
  growth-hormone releasing factor
                                                3-Aminobenzamide
      (porcine hypothalamus), <u>116</u>, 726
                                                  chondrocyte differentiation
  HC-toxin configuration (Helmintho-
                                                      enhancement (chicken limb bud
      sporium carbonum), 111, 398
                                                      cell culture), 111, 750
  hypothalamic growth hormone releasing
                                                  effect on
      factor (bovine), 117, 772
                                                    phytohemmagglutin-induced lympho-
  immunoglobulin \lambda-light chains
                                                      cyte proliferation (human), \underline{116}, 428
    fragments from peptic cleavage in
    urea (human), 111, 89
human urine, 117, 587
                                                    X-ray-induced DNA repair during two
                                                      phases of reconstitution (L1210
  interleukin 2
```

```
cells), 112, 1077
                                                        (chicken), 113, 377
                                                   translocation in vitro into mito-
  inhibition of
                                                       chondria, inhibition by hemin (chicken liver), 115, 700
    DNA synthesis and thymidylate
       synthase after methyl methane
                                                 2-Amino-4-methyl-1-pentanethiol
       sulfonate DNA damage (human),
                                                   inhibitory effect on leucine
                                                       aminopeptidase (porcine kidney),
    nicotinic acid protective effect on
                                                       116, 297
       ischemic injury-induced DNA
       damage during kidney storage
                                                 2-Amino-6-methyldipyrido[1,2-a:3',2'-d]-
       (mouse), <u>113</u>, 996
                                                       imidazole
γ-Aminobutyric acid
                                                   DNA modification, base sequence specificity (calf thymus), <u>116</u>, 1100
  binding to postsynaptic receptors,
       stimulation by exogenous sulfa-
                                                2-Amino-6-nitrotoluene
       tide (murine brain), 112, 827
                                                   microsomal N-hydroxylation, inhibi-
L-(\alpha-S,5-S)-\alpha-Amino-3-chloro-4,5-
                                                       tion by methimazole metabolite
                                                       (rat liver), <u>11</u>3, 433
      dihydro-5-isoxazoleacetic acid
  y-glutamyltransferase inactivation,
                                                 Aminopeptidases
      mechanism (rat kidney), 112, 564
                                                   action on adenocorticotropin NH2-
                                                       terminus (rat brain synaptic
Aminochromes
                                                   membrane), 111, 259 Cu(II) or Ni(II) substitution after
  dihydropteridine reductase inhibition
       (human brain), <u>113</u>, 895
1-Aminocyclopropane-carboxylic acid
                                                       Zn, effect on activity (Aeromo-
                                                       nas), 114, 646
  synthesis, inhibition by antifungal
                                                   enzyme-substrate complex, direct
       antibiotics Sinefungin, A9145C
                                                       detection by stopped-flow
       and synthetic nucleoside Siba
                                                   fluorescence (Aeromonas), 111, 946 inhibition by 2-amino-4-methyl-1-
       (tomato fruit extracts), 113, 586
4-Amino-6,7-dimethoxy-2[4-[5(3-[^{125}I]-
                                                        pentanethiol (porcine kidney),
       iodo-4-azidophenyl)pentanoyl]-1-
                                                        116, 297
       piperazinyl]-quinazoline
                                                 Aminopropylcadaverine
  α1-adrenergic receptor covalent
                                                   structural specificity in stimulating
       labeling (rat cerebral cortex),
                                                        spermidine auxotroph growth
       115, 946
                                                        (Escherichia coli), 117, 616
5-Amino-4-imidazole carboxamide trans-
                                                 2-Aminopyrimidine
       formylase, see Phosphoribosyl-
                                                   and ribose-5-phosphate aqueous
       aminoimidazolcarboxamide formyl-
                                                       reaction, nucleoside-5'-monophos-
       transferase
                                                       phate formation, 117, 93
Aminolevulinate aminotransferase
                                                 Aminopyrine
  4.5-dioxovalerate conversion to
                                                   H<sub>2</sub>O<sub>2</sub>-supported N-demethylation
       5-aminolevulinate in porphyrin synthesis (human, rabbit, rat
                                                       catalyzed by cytochrome P-450 and
                                                       horseradish peroxidase, EPR
       kidney, liver, spinach leaves),
                                                       stopped flow measurements, 113,
       112, 986
                                                       332
8-Aminolevulinate synthase, see 5-
                                                 Ammonium assimilation, see Nitrogen
       Aminolaevulinate synthase
                                                       fixation
5-Aminolaevulinate synthase
                                                 Ammonium chloride
  cytosolic precursor
                                                   effect on transferrin recycling (rat reticulocytes), \underline{113}, 650
    hemin-induced accumulation due to
       inhibited processing into mito-
                                                 Ammonium ion
       chondrial enzyme (chicken embryo
                                                   heterocyst and nitrogenase formation
    hepatocytes), 110, 42 molecular weight 74,000, processing
                                                        inhibition in wild and glutamine
                                                       synthetase-deficient strains
       during transport into mitochon-
                                                       (Anabaena cycadeae), 111, 180
       dria (chicken embryo liver), 110,
                                                   muscarinic receptor binding stimu-
                                                        lation changes after N-
     transfer into mitochondira, inhibi-
                                                       ethylmaleimide pretreatment
       tion by hemin (chick embryo
                                                        (chicken heart), <u>111</u>, 41
       liver), <u>117</u>, 344
                                                   regulatory role in 6-phosphofructo-
  heme translation inhibition (cell-
  free system), <u>115</u>, 225 isozymes in liver and erythroid
                                                       kinase response to adenylate
                                                       energy charge (permeabilized
                                                        Saccharomyces cerevisiae), 112, 96
```

cells, immunochemical comparison

1983 Cumulative

Subject Index

```
DNA and ribonucleotide binding
Amniotic fluid
                                                       characteristics (rat prostate).
  platelet-activating factor during
                                                       <u>114</u>, 1147
       labor (human), 113, 51
                                                   production, stimulation by androgen,
AMP (adenosine 5'-monophosphate)
                                                       triamcinolone acetonide effect
  binding to subtilisin-inactivated
                                                        (rat prostate, hamster ductus
      phosphorylase <u>a</u>, interaction with glucose binding, <u>113</u>, 825
                                                       deferens cloned tumor cells),
                                                       116, 1020
  inhibition of
    pyruvate dehydrogenase α-subunit
                                                 Androgens, see also specific androgens
       phosphorylation in isolated mito-
                                                   effect on testosterone metabolism
                                                        (rat granulosa cell culture),
       chondria (rat brain, heart,
       liver), 111, 1054
                                                        <u>113</u>, 948
    succinyl-CoA synthetase phosphory-
                                                   -stimulated androgen receptor pro-
       lation in isolated mitochondria
                                                        duction, triamcinolone aceto-
       (rat brain, heart, liver), 11\underline{1},
                                                        nide effect (rat prostate, ham-
       1054
                                                        ster ductus deferens cloned tumor
                                                        cells), 116, 1020
  with KCl, effect on phosphorylase
                                                 Androstenedione
       phosphatase sensitivity to glyco-
       gen inhibition, 114, 148
                                                   aromatization and 19-hydroxylation,
  6-phosphofructokinase activation,
                                                        evaluation, 117, 392
       comparison with fructose-2,6,-bisphosphate effect, 111, 294
                                                   lack of induction by Cu-chelating
AMP deaminase
                                                        drugs causing plasma ferroxidase
  regulatory role in 6-phosphofructo-
                                                        activity decrease (rat), 113, 127
       kinase response to adenylate
                                                 Anesthetics
       energy charge (permeabilized
                                                    local, F<sub>1</sub>-ATPase inhibition
       Saccharomyces cerevisiae), 112, 96
                                                        (mesophilic, thermophilic organ-
  forms, separation and comparison
                                                        isms), <u>112</u>, 822
       (chicken liver), <u>114</u>, 1011
                                                 Angiotensin converting enzyme, see
Amy lase
                                                        Dipeptidyl carboxypeptidase
  release by parotid cells in vitro
                                                 Angiotensin II
                                                   chromatin solubility increase (rat hepatic nuclei), 110, 61
       (mouse)
     stimulation by forskolin, 111, 21
     stimulation by isoproterenol,
                                                    conformation models in acidic aqueous
       augmentation by forskolin, 111, 21
                                                        solutions, clustering analysis,
α-Amylase
                                                        1<u>12</u>, 339
  amino acid sequencing, free thiol
                                                    effect on aldosterone secretion,
       group localization (porcine pan-
                                                        12-0-tetradecanoylphorbol-13-
       creas), <u>110</u>, 726
                                                        acetate and ionophore A23187 com-
   synthesis by membrane bound ribosomes
                                                        parison (porcine adrenal gland),
                                                        <u>116</u>, 555
       (Bacillus licheniformis), 114, 677
Anabaena cycadeae
                                                    L-malic acid analogues, molecular
                                                        weight and amino acid sequence,
   grown on NH¼, heterocyst and
                                                        fast atom bombardment mass spec-
       nitrogenase formation inhibition
                                                        tra, 115, 653
       in wild and glutamine synthetase-
       deficient strains, 111, 180
                                                 Angiotensin II receptors
Anaerobiosis
                                                    negatively coupled to adenylate
   DNA synthesis blockage and diadeno-
sine 5',5'''-P<sup>1</sup>,P<sup>4</sup>-tetra-
                                                        cyclase (rat aorta), 117, 420
                                                 Angle resolved fluorescence depolar-
       phosphate decrease in Ehrlich
       ascites cells with unchanged
                                                    oriented lipid membrane systems, \underline{116},
       levels of ATP, ADP, and AMP, 110,
                                                        462
       688
                                                 Anions
                                                    effect on F<sub>1</sub>-ATPase activity, mech-
anism (bovine heart), <u>113</u>, 273
Analbuminemia
  congenital, serum albumin gene
       structural integrity (human).
                                                    interactions wih Cu,Zn-superoxide
       116, 817
                                                        dismutase, lysine residue modifi-
Androgen receptors
                                                        cation effect (bovine erythro-
  dihydrotestosterone-binding,
                                                        cytes), <u>111</u>, 860
       detection in neonatal brain
```

(rat), 1<u>11</u>, 717

transport, arginine-specific reagent

phenylglyoxal effect (human

enzyme, inhibition of enzyme in erythrocytes), 110, 616 skin fibroblasts from normal sub-Anoxia effect on glycogenolysis and phosjects and patients with Type IV phorylase activity (rat hepa-tocytes), 115, 1033 Anthocidaris crassispina glycogen storage disease, 111, 636 plasma membrane ATPase, relationship (Candida tropicalis, Schizosaccharomyces pombe), 115, 1114 sperm activating peptides, purification, action, and amino acid sequence (egg jelly), 117, 147 rat liver glycogen synthase, mRNA translation product identifica-Anthracene tion (rabbit), <u>117</u>, 332 intercalative binding to DNA, α1-Antichymotrypsin fluorescence and photoelectron in normal and acute rheumatoid study, <u>112</u>, 1 arthritis plasma, amino terminal Antibiotics sequence differences (human), active hydrogen content, fast atom 111, 438 bombardment mass spectrometry Anti-factor Xa after H-D exchange, 112, 126 activity in heparin synthetic aminoglycoside, RNA synthesis pentasaccharide, 116, 492 stimulation in absence of protein Antigens carbohydrate α-galactosyl residue synthesis and guanosine polyphosphate production (Escherichia (human ovarian germ cell tumor), coli), 112, 801 115, 268 anthracycline, cardiotoxicity carcinoembryonic, dimeric structure connected with OH· radical (human colon adenocarcinoma liver metastases), 115, 206 generation in respiring mitochondria (rat heart), 114, 197 leukocyte common T200, 0-glycoantifungal, tomato fruit 1-aminosidically linked oligosaccharides cyclopropane-carboxylic acid of poly-N-acetyllactosamine type, synthase inhibition (Strep-B- and T-cell differences (hutomyces griseolus), 113, 586 man), 110, 424 Antibodies from pancreatic carcinoma, isolation diphtheric, streptococcal, and hepaand glycolipid structure charactitis synthetic peptides coupled terization (human), 110, 383 RNP, antigenic polypeptides, puri-fication and identification to tetanus toxoid, immunogenicity and response specificity (mouse), 1<u>17</u>, 908 (caprine liver), <u>114</u>, 564 domain-specific, proteolysis and Sm, antigenic polypeptides, puri-S-cyanylation, fibronectin domain fication and identification structure identification (human (caprine liver), <u>114</u>, 564 pericellular matrix, plasma), surface, variant-specific from clones 116, 534 of Trypanosoma equiperdum, puri--induced conformation restriction, fication and characterization, separation-free enzyme immuno-110, 491 assay (rabbit), <u>114</u>, 1097 synthetic type 24 streptococcal M insulin receptor, monovalent Fab protein, without carrier or adcomponent internalization by culjuvant, epitope specific immune response (mouse), 117, 359 tured lymphocytes (human), 114, Antimycin A lactose, polyclonal isomeric, light inhibitory effect on slow rise of and heavy chain pairing (rabbit electrochromic absorbance change serum), 113, 555 and initial rise generated by photosystem I (pea chloroplasts), malic enzyme, cross-reactivity for 111, 619 NADPH-binding region, 112, 1007 monoclonal, see Monoclonal antibodies Antiserum insulin receptor, simulation of N-terminal insulin effect on casein and α murine y-interferon synthetic peptide, production and characlactalbumin synthesis (pregnant terization, 117, 866 murine mammary explants), 111, 988 natural interferon y, neutral-Y3-melanotropin, inhibition of

ization of recombinant and natural interferon γ , 111, 626

normal liver glycogen branching

corticotropin-induced increase in

adrenal steroidogenesis (normo-

tensive and spontaneously hyper-

```
phatidylcholine (bovine milk), \underline{113}, 811
      tensive rats), 110, 357
  tritin from wheat, cross-reactivity
                                                Apotyrosinase
      with protein synthesis inhibitors
      from barley and rye, 114, 190
                                                   isolated from Neurospora crassa,
Antithrombin III
                                                       reconstitution with Cu and
  activity in heparin synthetic penta-
                                                       Cu^{2+}, 110, 313
      saccharide, <u>116</u>, 492
  binding sites for dermatan sulfate
                                                 1-β-D-Arabinofuranosylcytosine-5'-
      and heparin, heparin cofactor II
                                                       diphosphate-L-1,2-diacylglycerol
      comparison, <u>112</u>, 663
                                                   interactions with serum lipoproteins
  effect on amidolytic activity of
                                                        (canine, human), 116, 368
      thrombin, nerve growth factor, and kallikrein, \underline{113}, \underline{108}
                                                 9-B-D-Arabinosyl-2-fluoroadenine
                                                   conversion to toxic metabolite 2-
                                                       fluoro-ATP (murine P388 cells),
al-Antitrypsin
                                                       113, 35
  cDNA clone, isolation, detection in
      mRNA (human leukocytes, liver), 116, 375
                                                 Arachidonic acid
                                                   conversion to
Aortic endothelial cells
                                                     leurotriene A, hemoglobin-catalyzed
  binding sites for coagulation factors
                                                        transformation of 15-hydroxy-
      IX, IX_a, and X (bovine), 111,
                                                        eicosatetraenoic acid into
                                                       8,15- and 14,15-isomers (human),
Aortic smooth muscle cells
                                                        110, 273
                                                     leukotriene D4 by alveolar macro-
  migration induced by platelet-derived
      growth factor, mediation by
                                                       phages, increase in allergic
                                                       bronchial asthma (human), 111, 518
      lipoxygenase products of arachi-
                                                     monohydroxyeicosatetraenoić acids
      donic acid (rat), 112, 866
                                                       by aortic smooth muscle cells (rabbit), \underline{112}, 242
Aphidicolin
  inhibition of
                                                     prostaglandins E_2 and F_{2\alpha} by
    adenovirus DNA internal region
    synthesis, \underline{113}, 87 DNA synthesis and thymidylate
                                                       erythrocytes (Opsanus tau), 110,
                                                   incorporation into various phospho-
      synthase after methyl methane
                                                       lipids, all-trans-retinoic acid effect (guinea pig peritoneal
      sulfonate DNA damage (human),
      117, 30
                                                       granulocytes), 114, 261
Aplysiatoxin
                                                   lipoxygenase products
  inhibition of 12-0-tetradecanoyl-
                                                     mediation of aortic smooth muscle
      phorbol-13-acetate binding to
                                                       cell migration induced by
      sphingomyelin, 112, 709
                                                       platelet-derived growth factor
Apoferritin
                                                       (rat), 112, 866
  Fe(III) incorporation, ferroxidase
                                                     stereospecific inhibition of pros-
      effect (equine), 116, 244
                                                       taglandin H<sub>2</sub>-induced platelet
                                                       aggregation (human), 112, 878
Apolipoprotein A-I
                                                   metabőlism
  multiple charge isoforms in plasma,
                                                     coupled to cooxygenation re-
      translation in vitro by hepatic
                                                       actions, role in aflatoxin B<sub>1</sub>
      and enteric mRNAs from different
                                                       activation for DNA binding
      strains (mouse), <u>11</u>4, 275
                                                       (murine embryo fibroblasts), 112,
  precursor protein
    coded by mRNA from human liver,
                                                     docosahexaenoic acid effect (hu-
      amino acid sequencing using
                                                       man), <u>117</u>, 549
      cloned cDNA, <u>112</u>, 257
                                                     via cyclooxygenase, inhibition by
    identification, amino acid
                                                       anti-inflammatory drugs (rat
      sequence, and metabolic conver-
                                                       neutrophils from reverse passive
      sion (rat lymph, plasma), <u>116</u>, 704
                                                       Arthus reaction pleural exu-
  production in plasma from proapolipo-
                                                       dates), 112, 586
      protein A-I by proteolytic
      cleavage (human), <u>113</u>, 626
                                                     via lipoxy<del>gen</del>ase
Apolipoprotein C-II
                                                       inhibition by flavoniods (rat
                                                         basophilic leukemia cells),
  effect on lipoprotein lipase-
      catalyzed hydrolysis of di-
                                                         116, 612
      hexanoyl- and diheptanoyl-phos-
                                                     stimulation by anti-inflammatory
```

```
oligomycin-sensitive ATPase
        drugs (rat neurophils from re-
        verse passive Arthus reaction
                                                      photoaffinity crosslinking
                                                      (bovine cardiac mitochondřia),
        pleural exudates), 112, 586
                                                      111, 732
    reactive oxygen and cAMP production
      (rat peritoneal macrophage), 114,
                                               Aryl hydrocarbon hydroxylase, see
      549
                                                      Flavoprotein-linked monooxygenase
 release from
                                               Arvisulfatase A
    ionophore A23187-stimulated
                                                  subunit structure alteration in
      neutrophils, role in platelet-
                                                      fibroblasts from patients with
      activating factor synthesis (rab-
                                                      pseudodeficiency, 112, 191
      bit), 113, 72
                                                 synthesis and maturation in fibro-
    platelets, thrombin-stimulated.
                                                      blasts from metachromatic
      effect of diglyceride/mono-
                                                      leukodystrophy and pseudo-
                                                      deficiency, 112, 198
      glyceride lipase pathway inhibi-
      tion (human), 113, 241
                                               Arvlsulfatase A pseudodeficiency
  stimulation of A23187-induced
                                                 structurally altered enzyme detection in fibroblasts (human), 112, 191,
      prostaglandin production by
      macrophages, mechanism (rat),
                                                      198
      114, 248
                                               Ascorbate
  superoxide radical induction in
                                                 effect on Ca, Zn superoxide dismutase
      neutrophils, unaffected by pros-
                                                      electrophoretic variants (bo-
      taglandins E_1 and I_2 (human),
                                                      vine), 117, 677
      113, 506
                                               Ascorbic acid
  12-0-tetradecanoy1phorbo1-13-acetate-
                                                  autooxidation, bicyclic ring forma-
      induced release from
                                                      tion role, 1<u>1</u>5, 531
    C3H1OT1/2 cells, inhibition by
                                                  -methemoglobin interaction, activated
      lecanoric acid analogs, 111, 733
                                                      oxygen species production, mecha-
    3T3 rat cell variants with loss of
                                                      nism, 111, 980
      mitogenic response to tumor pro-
                                               L-Ascorbic acid
      moter, 111, 194
                                                  inhibition of hydroxyprolin-rich
  transfer to various lysophospholipids
                                                      glycoprotein insolubilization in
      catalyzed by acyltransferases,
                                                      cell wall (carrot root slices),
      relative rates and localization
                                                      112, 161
      (rat pancreatic acini), 112, 502
                                                  reduction of benzolalpyrene mutagenic
                                                      activity, comparison with chal-
cone antimutagenic activity (Sal-
  essential residues in citrate lyase
      subunits (Klebsiella aerogenes),
                                                      monella typhimurium), 112, 83\overline{3};
      <u>111</u>, 490
Arginine vasopressin
                                                      erratum, 115, 406
  -stimulated intracellular pH increase
                                                  singlet ^1\Delta_{\rm g} molecular oxygen quenching in aqueous media, \underline{115},
      (Swiss 3T3 cells), <u>116</u>, 931
Arginine vasopressin receptors
  characterization (rat anterior pitu-
                                               Asialoorosomucoid
itary gland), 115, 492
Arginyl-tRNA synthetase
                                                  -hepatocyte binding, diabetes-induced
                                                      variation (rat), 115, 82
  and lysyl-tRNA synthetase complex,
                                                Aspartate aminotransferase
      12-S, hydrodynamic properties and
                                                  activation by pyridoxamine
      structure (rat liver), 117, 464
                                                      5'-phosphate, inhibition by
Aromatic hydrocarbons
                                                      phosphates and anionic compounds
  polycyclic, degradation dependence on
                                                      (porcine heart), <u>112</u>, 629
      plasmid pKG2 (Beijerinckia sp.),
                                                  mitochondrial precursor maturation,
      111, 939
                                                      cytoskeleton inhibitor effects
Arsenazo III
                                                      (chicken embryo fibroblast), 115,
  -Ca<sup>2+</sup> interactions, tempera-
      ture-jump relaxation, kinetics, 111, 1027
                                                      144
                                               Aspartate chemoreceptor
                                                  -methyl-accepting chemotaxis protein,
Arylamines
                                                      ion channel element selection
  carcinogenic, prostaglandin H
                                                      (Salmonella typhimurium), 115, 648
      synthase-mediated reaction with
                                                L-Aspartate oxidase
      tRNA and homopolyribonucleotides.
      mechanism, <u>111</u>, 96
                                                  in cotton callus cells, requirement
                                                      for unidentified dialyzable co-
3'-Arylazido-8-azido ATP
```

1983 Cumulative Subject Index

```
factor, <u>111</u>, 188
Aspartyl-tRNA synthetase
  large scale purification, structural
       properties (yeast), 117, 259
Aspergillus nidulans
  transformation to phototrophy by
       orotidine-5'-phosphate decar-
       boxylase gene segment from Neuro-
       spora crassa, 1<u>12</u>, 284
Aspergillus ochraceus
  microsomal benzo[a]pyrene hydroxylase
      characterization, 113, 497
Aspergillus parasiticus
  mutant-derived cell-free system,
       sterigmatocystin conversion to 0-
      methylsterigmatocystin and afla-
       toxin B<sub>1</sub>, 1<u>1</u>6, 1114
Ataxia-telangiectasia
  neocarzinostatin-treated fibroblasts,
       defective DNA repair (human
skin), 110, 483
ATP (adenosine 5'-triphosphate)
  binding to elastase-inactivated
       carbamoyl-phosphate synthetase
       (ammonia) (rat liver), 117, 238
  cellular pool, evolution after
       uv-mediated SOS system induction
       (Escherichia coli), 117, 556
  and creatine kinase: kinetic
       properties, functional roles, and
       compartmentation (rabbit glycer-
       inated muscle fiber), 114, 785
  decrease in adenocarcinoma cells
       during glucose starvation (hu-
       man), 110, 371
   -dependent proteolysis, role in
       methemoglobin reductase solubili-
  zation during reticulocyte maturation (rabbit), 116, 357
enzyme-bound, synthesis by F1-ATPase
       in dimethylsulfoxide, 114, 907
  Mg-, <u>see Mg-ATP</u>
millimolar levels, Mg-ATP
       dissociation constant, 31p NMR
       and optical absorbance spectros-
       copy (perfused, ischemic heart
       muscle) <u>117</u>, 210
   oligomycin-sensitive synthesis,
       inhibition by tribenzylphosphate,
       mechanism (yeast mitochondria),
       113, 751
   -phosphoenolpyruvate counter-
       transport system in C3 and C4
       chloroplasts (maize pea), 116, 945
   prevention of adenylate cyclase
       inactivation at 0° (S49 murine
       lymphoma cells), <u>112</u>, 250
  -stimulated
Ca<sup>2+</sup> accumulation by chromaffin
       granules and mitochondria (adre-
       nal medulla), 117, 245
```

```
muscarinic binding site loss due to
       orthovanadate contamination (rat
       corpus striatum), 110, 567
    vascular prostacyclin synthesis
       (rabbit aorta, pulmonary ar-
       tery; rat aorta), 112, 284
ATP/ADP ratio
  in adenosine release by isolated
       cardiac mitochondria (rat), 113,
ATPase
  activity, effect of linoleic acid
  pholipids (rat liver), 117, 809 Ca^{2+}
       incorporation into membrane phos-
    calmodulin antagonist effects
       (porcine sperm), 114, 28
     stimulation by ATPase inhibitor
       protein from boyine cardiac mito-
       chondria (rabbit sarcoplasmic
       reticulum), 111, 274
     transport, phosphoprotein
       intermediate (rabbit sarcoplas-
       mic, rat endoplasmic reticulum),
       114, 584
  Ca^{2+},Mq^{2+}, molecular weight,
        determination by radiation in-
        activation (human erythrocyte membrane), 116, 895
     cell-free synthesis directed by
       mRNA from aged slices of sweet
     potato roots, <u>113</u>, 235
enzyme-bound ATP synthesis in
       dimethylsulfoxide, 114, 907
     -N-ethoxycarbony1-2-ethoxy-1,2-dihy-
       droquinoline, binding and kinet-
        ics (E<u>sch</u>eri<u>chia coli</u>), <u>1</u>14, 684
     subunit accessibility to acetic
       anhydride and diazonium benzene-
        sulfonic acid, activating and in-
       activating ligand effects (bovine
     heart), 113, 273
thermophilic, resistance to specific F<sub>1</sub>-ATPase inhibitors including local anesthetics (bacterium PS3), 112, 822
  H^+, K^+-, inhibition by allyliso-
       thiocyanate (porcine gastric mucosa), 112, 464
  MF_1, NBD-labeled tyrosine residue.
        identification (bovine heart),
       <u>116</u>, 599
Na<sup>+</sup>,K<sup>+</sup>-
     activity increase after treatment
       with phosphatidylserine vesicles
```

(cultured BHK 21 cells), 115, 470

<u>structures (equine kidney), 113,</u>

in dodecyloctaethyleneglycolether solution, monomeric and trimeric

361

```
and electrogenic (Na^+, K^+) pump, V^+ inhibition and bleo-
                                                    Atropine
                                                      reversal of carbachol inhibitory
                                                           effect on (-)isoproterenol-stimu-
lated cAMP synthesis and adreno-
     mycin effects (rat brain, skele-
     tal muscle), 116, 783
                                                           corticotropin secretion (murine
  modification by cyclic nucleo-
                                                           pituitary tumor cells), 114, 289
     tide-mediated processes (hamster
     sperm homogenate), <u>112</u>, 132;
                                                    Auxin receptor
  erratum, 114, 431 sensitivity to Ca<sup>2+</sup> inhibition,
                                                       reconstituted in bilayer lipid
                                                            membranes, electrochemical re-
     increase with hemolysate (human
                                                            sponse to naphthalene-1-acetic
  erythrocytes), 111, 970 vanadate-facilitated binding of
                                                            acid (maize leaves), 110, 300
                                                    Axons
    [3H]ouabain, determination of
                                                      crustacean, membrane vesicle
                                                            interaction with 4-(N-maleimido)
     ouabain binding site number in
                                                            benzyltrimethylammonium specific
     small muscle biopsies (rat), 111,
     319
                                                            for nicotinic acetylcholine re-
                                                            ceptor (lobster), 111, 61
  oligomycin-sensitive
                                                    AY9944
     photoaffinity crosslinking by
       3'-arylazido-8-azido ATP (bovine
                                                       inhibition of cholesterol and DNA
       cardiac mitochondria), <u>111</u>, 732
                                                            synthesis in lymphocytes (human
                                                           peripheral blood), 110, 82
     temperature-dependent intrinsic
                                                    5-Azacytidine
       tryptophan fluorescence (bovine
                                                      effect on α-fetoprotein and albumin
       cardiac submitochondrial par-
                                                            production in cytosol and serum
       ticles), <u>111</u>, 366
                                                            (neonatal rat), <u>116</u>, 939
  plasma membrane, antigenic rela-
tionships (<u>Candida tropicalis</u>
                                                       endogenous retrovirus induction with
                                                           proviral DNA hypomethylation
       Schizosaccharomyces pombe), 115,
                                                            (rat embryonic fibroblasts),
       1114
                                                            112, 571
  proton-translocating
                                                       inhibition of casein synthesis and
     defective in & subunit of F1
                                                            lactose synthase activity in dif-
       and b subunit of F<sub>0</sub> (Escherichia coli mutants), 111, 143
                                                           ferentiating mammary gland \underline{in} \underline{vitro} (mouse), \underline{111}, 150
     interaction with oligomycin or
                                                      tyrosine aminotransferase stimulation
       dicyclohexycarbodiimide, kinetics
                                                            in fetal liver (rat), <u>113</u>, 645
       (bovine cardiac mitochondria),
                                                    4-Azidobenzoyltrimethionine
       111, 333
  role in Golgi apparatus function (rat liver), 114, 620
                                                       competitive inhibition of trimethi-
                                                            onine uptake (<u>Candida al</u>-
                                                           bicans), 110, 884
ATPase inhibitor protein
  from bovine cardiac mitochondria, stimulation of Ca<sup>2+</sup>-ATPase from
       rabbit sarcoplasmic reticulum,
       <u>111</u>, 274
                                                    Aziridine
ATP citrate (pro-3S)-lyase
   adrenalectomy and dexamethasone
       effects in vivo (rat testes),
       <u>115</u>, 606
                                                           <u>1</u>10, 220
  protein kinase, acetyl CoA carboxyl-
       ase phosphorylation (rat liver).
       117, 435
Atractyloside
  adenosine release inhibition, adenine
       nucleotide translocase role (rat
       cardiac mitochondria), 113, 990
   prevention of mitochondrial membrane
       potential restoration by ADP or ATP with {\rm Mg}^{2+} (rat liver), \underline{111},
                                                            teases, <u>111</u>, 630
                                                    Azido-phencyclidine
       792
Atrial natriuretic factor
  purification and vasorelaxant activ-
       ity (rat), 1<u>16</u>, 696
```

```
p-Azido-m-[125I]-iodobenzylcarbazolol
  photoaffinity labeling of B-adren-
       ergic receptors in lung membranes
       (hamster, rat), 110, 504
  formation from 2-chloroethylamino-
       benzoquinone derivatives by
       microsomal enzymes (rat liver).
12-(4-\overline{\text{Azido}}-2-\text{nitrophenoxy}) stearoyl-(1-14\text{C})-glucosamine
  erythrocyte membrane photolabeling,
       staphylococcal α-toxin detection
(rabbit), <u>111</u>, 444
<u>p</u>-Azidophenacyl bromide
  as photoaffinity reagent for use with
       pepsin and other carboxyl pro-
  binding to acetylcholine receptors
       with carbamylcholine, species
       differences (Torpedo californica,
```

1983 Cumulative Subject Index

T. marmorata, T. ocellata), 113,

Azidosemimethemerythrin

binuclear Fe site, oxidation state EPR study, 112, 954

Aziridinylnaphthoquinone

formation from 2-bromoethylaminonaphthoquinone (rat hepatocytes), 112, 356

В

Bacillus coagulans

Tysozyme digest, linkage region between poly(galactosyl glycerol phosphate) and peptidoglycan, identification, 111, 312

Bacillus megaterium

soluble cytochrome P-450 induction by pheobarbital, spectral changes by membrane-bound respiratory cytochromes, 112, 927

uv-induced DNA photoproducts in isolated and nonisolated developing forespores, 113, 618

Bacillus stearothermophilus

tRNA^{Leu} primary structure, <u>112</u>, 578 Bacillus subtilis

α-amylase gene cloned in pUB110, nucleotide sequence of promoter and NH₂-terminal signal peptide region, <u>112</u>, 678

ATCC 6633, subtilin precursor protein detection in vivo and conversion in vitro, 116, 751

uv-induced DNA photoproducts in isolated and nonisolated developing forespores, 113, 618

Bacillus licheniformis

α-amylase and α-glucosidase synthesis by membrane bound ribosomes, 114, 677

Bacillus megaterium

cytochrome P-450-dependent fatty acid monooxygenase induction by barbiturates, 116, 843, 851

Bacillus thuringiensis var. israeliensis
spontaneous loss of high-molecularweight plasmid and biocide,
correlation with acrystalliferous
variant appearance, 110, 477

Bacteria, see also specific bacteria cell walls, pre-phenoloxidase activation (silkworm hemolymph plasma), 113, 562

mixed culture, natural gas production by anaerobic digestion of castor cake (cow dung), <u>110</u>, 32

soil, grown on mevalonate, isoprenoid biosynthesis, 110, 187 Bacteriophages

λ, -infected minicells, Escherichia coli dna-J- and dnaK-gene product synthesis and membrane affinity, 110, 176

M13, B protein conformation, different in filaments, I-forms, and spheroids, circular dichroism study, 112, 349

T4, λ hypothetical and tail-fiber proteins, sequence homology, $\underline{115}$, $\underline{1061}$

T4D gene 29-infected Escherichia coli B, folylpolyglutamate synthetase identification, 116, 1119

Bacteriorhopsin

carboxyl group localization in retinal chromophore vicinity, 114, 872; erratum, 115, 407

incorporation into large unilamellar liposomes by reverse phase evaporation, photochemical activity, 111, 373

Barbiturates

-induced cytochrome P-450-dependent
 fatty acid monooxygenase
 characterization (Bacillus

megaterium), 116, 851 structure and inducer activity relationship (Bacillus megaterium), 116, 843

Basement membranes

laminin components, isolation without prior protease digestion (human amnion, chorion, chorionic microvessels), 112, 1091

lens epithelium, in vivo glycosylation (normal, diabetic human), 117, 51

Beijerinckia sp.

plasmid pKG2, role in polycyclic aromatic hydrocarbon degradation, 111, 939

Benzamide

chondrocyte differentiation enhancement in limb bud cell culture (chicken), 111, 750

Benz[a]anthracene

derivatives, intercalative binding to DNA, fluorescence and photo-electron study, 112, 1

Benzoflavones

epoxide hydrolase activation (human lymphocytes), 110, 525

Benzolactams

dipeptidyl carboxypeptidase inhibitor, synthesis and characterization, <u>117</u>, 108

Benzo[a]pyrené

epidermal metabolism and DNA binding,

```
inhibition by ellagic acid (rat),
                                                       ture (cow dung), 110, 32
       114, 388
                                                 Bioluminescence
                                                   production by luciferase and
  microcrystalline, liposomal uptake,
                                                       oxidoreductase isolated from Vib-
       synchronous fluorescence study,
                                                        rio harveyi, enzyme concentration
       <u>112</u>, 1069
                                                       effect, 111, 266
  mutagenic activity, reduction by
                                                 Biotin
       chalcone derivatives (Salmonella
                                                   sulfur incorporation from cystine,
       typhimurium), 112, 833; erratum,
                                                       methionine, and thiocystine
       115, 406
                                                        (Escherichia coli), <u>110</u>, 243
Benzo[a]pyrene hydroxylase
                                                 BiphenyT
  induction
                                                   oxidation, dependence on plasmid pKG2
     during pregnancy in liver and lung
                                                        (<u>Beijerinckia</u> sp.), <u>111</u>, 939
       (C57B1 and DBA/2 mice), 112, 313
                                                 1,3-Bis-(2-chloroethy1)-1-nitrosourea
     effect of cytochrome P-450 types
       (Aspergillus ochraceus TS), 115,
                                                   DNA-chromosomal protein crosslinking
                                                        (HeLa cells), <u>114</u>, 767
                                                 Bis(5'-guanosyl) tetraphosphatase inhibition by Zn<sup>2+</sup>, reversal by
  microsomal, characterization (Asper-
       gillus ochraceus), 113, 497
                                                        EDTA, kinetics (rat liver), 113,
                                                        717
Benzo[a]pyrene 4,5-oxide
  epoxide hydrolase substrate in intact
                                                 1,4-Bis[2-[(2-hydroxyethyl)amino]ethyl-
                                                        amino]-9,10-anthracenedione
       lymphocytes (human), 110, 525
Benzodiazepine receptors
                                                   antitumor activity with low cardio-
  developmental changes, protein
                                                        toxicity, effect on lipid per-
      carboxylmethylation role (rat
                                                        oxidation induction in heart and
      brain), <u>116</u>, 1056
                                                        liver (mouse), 110, 399
N-α-Benzoyl-L-arginine amide
                                                 Bisulfite
  effect on urokinase specific SS bond
                                                   reduction by Desulfotomaculum
      reduction, 112, 754
                                                       nigrificans cell extracts, tri-
Bethanecol
                                                        thionate and thiosulfate inter-
  -stimulated pancreas, effect on
                                                       mediates, 117, 530
      phospholipid synthesis (human,
                                                 Bleomycin
      rat), 115, 771
                                                   complexes with
Bialaphos
                                                     Co<sup>3+</sup>, hydroperoxide bound to
  biosynthesis, role of phosphinic acid
                                                       Co, fast atom bombardment
      derivatives MP-103, MP-104, and
                                                        spectra, 110, 959
      MP-105 (Streptomyces hygroscopi-
                                                     Fe^{3+} and Fe^{2+}, Mossbauer
cus SF-1293 mutant), 111, 1008
Bile acids
                                                        spectra, 110, 827
                                                   DNA break induction, detection by
  hydroxylation, regulation by
                                                        nick translation (human fibro-
      microsomal and cytosolic protein
                                                   blasts), 111, 383
effect on V<sup>+</sup> inhibition and
activity of Na<sup>+</sup>, K<sup>+</sup>-ATPase
      fractions (rabbit liver), 113, 212
  secretion patterns during isolated
       liver perfusion (rat), 115, 518
                                                        and electrogenic (Na<sup>+</sup>, K
Bile pigments
                                                   pump (rat brain, skeletal
muscle), <u>116</u>, 783
-Fe<sup>2+</sup> interaction resulting in
  insect, sarpedobilin biosynthesis
       from pterobilin (Papilio sarpe-
      don), 110, 779
                                                        chemiluminescence, prevention by
Bilirubin diglucuronide
                                                        DNA, 112, 378
  formation by microsomes, intact
                                                   -monoclonal antibody conjugate,
       tetrapyrrole affinity and thin
                                                       production using dextran T-40.
       layer chromatography (rat liver),
                                                        antigen-targeting cytotoxicity,
       117, 406
                                                       <u>115</u>, 1009
Biocide
                                                   nucleotide sequence cleavage,
  rapid loss and spontaneous loss of
                                                        guanine-modified DNA, 117, 916
       high-molecular-weight plasmid,
                                                   photolabeling of dopamine-s-
       acrystalliferous variant appear-
       ance (Bacillus thuringiensis var.
                                                       hydroxylase (bovine adrenals),
                                                        <u>112</u>, 273
       israeliensis), 110, 477
                                                 Blood
Biogas
                                                   radioreceptor assay, epidermal growth
  production from castor cake during
```

anaerobic digestion by mixed cul-

factor interference (human blood

356

Subject Index

8-Bromoguanylic acids serum), 114, 1036 binding to ribonuclease T1, absorpsubstitution by human hemoglobininulin conjugate with high oxygen tion and circular dichroism carrying capacity (rat), 113, 513 spectroscopy, 114, 88 3-Bromomethylmenadione Blood-brain barrier reduction by DT-diaphorase and breakdown, mediation by microvascular mutagenicity to Salmonella typhipolyamine synthesis (rat ceremurium, inhibition by dicoumarol, bral cortex), 116, 1039 <u>111, 3</u>46 Bombesin 4-Bromomethyl-7-methoxycoumarin absence in quinea pig and rat brain. pseudouridine modification in 5-S RNA 112, 528 from yeast in melting study, 114, Bone formation endochondral, prostaglandin con-Bromosulfophthalein centration changes (rat tissue). in glutathione transferase isozyme 117, 746 discrimination (rat liver), 114, Bone marrow 829 transplantation in Niemann-Pick mice. α-Bungarotoxin decrease in sphingomyelin and binding to chicken brain membrane, cholesterol accumulation in inhibition by choline from calf spleen, 113, 605 brain extract, 111, 82 Bonakrekate Buoyant density potentiation of mitochondrial mem-Escherichia coli, increase in cells brane potential restoration by ADP or ATP with Mg²⁺ (rat producing high level of s-galactosidase promoters, 111, 104 liver), 111, 792 Buthiobate Bordetella pertussis inhibition of lanosterol 14a-deislet-activating protein isolated methylation by cytochrome P-450 from culture medium, action on (Saccharomyces cerevisiae), 115, neonatal rat pancreatic islets, 642 112, 684 Butyrate Bradykinin effect on glycosylation of glycoamino acid sequence in T-kinin (rat protein hormone α-subunit seplasma), 112, 701 creted by glucose-starved Chang Brain cell surface protein (BSP-2) human hepatic cells, 112, 115 structural similarity to neural cell adhesion molecule (N-CAM) (murine brain), 112, 482 C Branched chain a-ketoacid dehydrogenase, see 2-0xoisovalerate de-C kinase, see Protein kinase hydrogenase (lipoamide) Cadmium Bromelain environmental and hepatic non-metal active site substrate conformation, lothionein proteins (rainbow resonance Raman spectra comparitrout), 110, 548 son with chymopapain, ficin, and injected intraperitoneally, detoxipapain, <u>117</u>, 725 cation by hepatic metallothionein Bromide (rainbow trout), 110, 584 -stimulated chloroperoxidase activ-Calcineurin ity, free hypohalous acid activation by Ni²⁺ (bovine brain). formation, 116, 873 114, 955 Bromoacety1-D-arginine Calcitonin enkephalin convertase inhibition, inhibition of human breast cancer kinetics, 111, 994 cell growth in dose-related 5-Bromodeoxyuridine manner, 110, 235 endogenous retrovirus induction Calcium accumulation without proviral DNA hypomethylation (rat embryonic fibroblasts), ATP-stimulation (adrenal medulla <u>112</u>, 571 chromaffin granules, mitochon-dria), <u>117</u>, 245 2-Bromoethylaminonaphthoquinone norepinephrine-induced, leucine conversion to aziridinylnaphthoenkephalin antagonism (rat quinone (rat hepatocytes), 112,

atria), 117, 536

1983 Cumulative

Subject Index

-actin, polymerization characteristics, 1<u>16</u>, 478 Calcium ion action potential spike, tetanus toxin effect (neuroglastoma clone N1E-115), 115, 788 -activated proteases, effect on spectrin and band 3 protein (rat erythrocyte membrane), 117, 372 and antagonists, effect on felodipine binding to calmodulin, fluorescence study, <u>112</u>, 787 -arsenazo III interactions, temperature-jump relaxation kinetics, 111, 1027 binding activity in 100,000 x g supernatant (bovine brain, heart), 116, 435 to fibronectin, equilibrium dialysis (human), 111, 1045 to troponin C, effect on enthalpy, entropy, and heat capacity (bovine heart), 114, 162
-calmodulin, 3',5'-cyclic-nucleotide phosphodiesterase isozyme activation in larval brain (Drosophila melanogaster wild-type and dunce mutant), <u>111</u>, 652 -concanavalin A solutions, ⁴³Ca NMR, 115, 22 cytoplasmic conncentration in platelets, 9,11-epithio-11,12-methanothromboxane A2 effect (human), 117, 663 thrombin-induced increase, prevention by adenylate cyclase stimulators (human), 113, 598

glutathione transferase-erythrocyte membrane association (human), <u>114</u>, 488

protein kinase, inhibition by quercetin (murine brain cytosal), <u>117</u>, 444

stimulation of hexose transport by ionophore A23187, 12-0-tetra-decanoylphorbol-13-acetate, and epidermal growth factor (murine 3T3 fibroblasts), <u>117</u>, 637

effect on

fatty acid oxidation and ketogenesis (rat liver mitochondria), 116, 173

insulin and insulin-like growth factor-1 receptor affinity (human placental microsomal membrane), 116, 63

photoactivation of water-oxidation system and photosystem II elec-

tron transport (dark-grown Picea <u>abies</u> chloroplasts), <u>116</u>, 803 prothrombin molecular states and reaction with bifunctional alkylating reagents, 111, 213 free intracellular

concentration, carbachol and cholecystokinin effects (murine pancreatic acini), 117, 122 phorbol 12-myristate 13-acetate neutrophil activation effect (rabbit peritoneum), 114, 638

fructose-1,6-bisphosphatase activation inhibition by spermidine and spermine (spinach chloroplasts), 115,

fusion induction in small unilamellar phospholipid vesicles, freezefracture study, <u>110</u>, 15

inhibition of

Na⁺,K⁺-ATPase in erythrocyte membranes, enhancement by hemolysate (human), 111, 970

 Tb^{3+} binding to high-affinity, not to low-affinity terbium binding sites (GH3 pituitary tumor cells), 111, 135

-ionomycin complex, conformational change, mediation by lipid-water interface, <u>1</u>14, 632

and ionophore $A\overline{231}87$, phospholipid hydrolysis and cell death stimulation, activation by mercuric chloride (murine fibroblasts), 110, 758

lipid-associated ionophoretic activity, stimulation by isletactivating protein from Bordetella pertussis (neonatal rat pancreatic islets), 112, 684

low concentration, stimulation of synexin binding to chromaffin granules, pH sensitivity (bovine liver), <u>114</u>, 355

Na⁺-induced release (Ehrlich ascites tumor mitochondria), 115, 430

in neutrophils, increase after stimulation with chemotactic factors (human, rabbit), 113, 44

permeabiltiy, <u>S-adenosylmethionine</u> effect in proteolipsomes (chicken erythroycyte membrane proteins), 113, 1126

and phosphate, induction of mitochondrial membrane potential collapse, prevention by ADP or ATP with Mg^{2+} (rat liver), $\underline{111}$,

and phospholipid-activated protein kinase, isolation and characteri-

```
zation (murine lymphosarcoma
                                                           energy coupling (rat liver),
      cells), <u>116</u>, 675
                                                           115, 76
  regulation of somatostatin binding to
                                                    platelets, thrombin-induced,
       pancreatic membranes (guinea
                                                         inhibition by cAMP (human), 112,
  pig), 115, 827
troponin-tropomyosin binding
                                                       sperm, stimulation by calmodulin
      regulation (reconstituted thin filament), \underline{114}, 447
                                                         antagonists (porcine), 114, 28
                                                  Calmidazolium
Calcium-binding proteins
                                                    stimulation of Ca<sup>2+</sup> uptake by
  identification in 100,000 x g super-
                                                         sperm, calmodulin involvement
      natant (bovine brain, heart),
                                                         (porcine), 114, 28
       116, 435
  Zn<sup>2+</sup> binding (human brain), <u>114</u>,
                                                  Calmodulin
      1138
                                                    aluminum binding-induced structural
                                                    changes (bovine brain), \frac{115}{x}, 512 binding activity in 100,000 \frac{1}{x} g supernatant (bovine brain,
Calcium carbonate
  supersaturated solutions, precipi-
tation inhibition by human pan-
                                                    heart), \underline{116}, 435 -Ca<sup>2+</sup>, activation of 3':5'-cyclic-
      creatic stone protein, 110, 69
Calcium channel
                                                         nucleotide phosphodiesterase iso-
  nitrendipine-sensitive, molecular size determination (rat brain
                                                         zymes in larval brain (Drosophila
                                                         melanogaster wild-type and dunce
      synaptic membranes, rabbit skele-
      tal muscle transferse tubule mem-
                                                         mutant), 111, 652
                                                    Ca<sup>2+</sup>-dependent high affinity
      branes), 111, 878
Calcium transport
                                                         binding to mastoparans from wasp
  across amnion and visceral yolk sac
                                                         and hornet venoms, kinetics, 114,
       in maternal-to-fetal direction,
                                                     in cell lines sensitive to interferon
      in vitro study (guinea pig), 110
                                                         antiproliferative effect, inter-
      438
                                                         feron-induced decrease during
  ATPase, phosphoprotein intermediate
                                                         cell cycle (canine, human), 111,
       (rabbit sarcoplasmic, rat endo-
                                                         430
      plasmic reticulum), 114, 584
                                                     during cell transformation induced by
  efflux from quiescent fibroblast cell
                                                         Rous sarcoma virus temperature-
      line, stimulation by fetal calf
                                                         sensitive mutant, 112, 647
      serum (rat), 114, 240
  influx
                                                     -dependent protein kinase, glycogen
    antigen-stimulated, phospha-
                                                         synthase phosphorylation, sub-
      tidylinositol turnover role (rat
                                                         srate specificity (rabbit liver),
    mast cells), 117, 710 in pancreatic islet B cells, in-
                                                         116, 412
                                                    effect on Ca<sup>2+</sup>-dependent 3':5'-
      duction by dibutyryl cAMP
                                                         cyclic-nucleotide phosphodiester-
       (mouse), 112, 614
                                                         ase activation and inactivation
  across plasma membrane of wheat
      protoplasts, stimulation by
                                                         (bovine retinal rod outer seg-
                                                         ment), 113, 317
      ATPase inhibitors and ionophore
                                                     felodipine binding, calmodulin and
      A23187, unaffected by plant hor-
                                                         Ca antagonist effects, fluores-
      mones and red-far red light, 113,
                                                         cence study, 112, 787
      171
  uptake by
                                                     hydrophobic site localization with
    mast cells, ionophore A23187-
                                                         tryptic fragments (bovine brain).
                                                         115, 87
      induced, role of phospholipid
      metabolism and histamine release
                                                     inhibition, metal toxicity
      (rat), 111, 581
                                                         correlation (bovine brain), 115,
    mitochondria
      chronic ethanol feeding and
                                                    -NADH semidehydroascorbate reductase,
         cetaldehyde metabolism effects
                                                         interactions in clathrin coated
         liver), <u>117</u>, 169
                                                         vesicles (rat liver), 115, 952
                                                    phospholipase A_2 modulation (snake venom), 115, 94 regulation of Ca^{2+} uptake by sperm,
      phosphate-dependent ruthenium
         red-insensitive (mung bean),
         114, 1176
```

mechanism (porcine), 114, 28

photosensitization effects on

```
role in renal cell carcinoma (human),
                                                 inhibition of
       114, 843
                                                   forskolin-stimulated cAMP
  -stimulated 3',5'-cyclic-nucleotide
                                                     production, adrenocorticotropin
       phosphodiesterase
                                                     secretion, and adenylate cyclase
                                                     activity (murine pituitary tumor cells), 114, 289
    danylcadaverine effect (bovine
       heart), 117, 562
                                                   (-)isoproterenol-stimulated cAMP
    prevention by calmodulin-
                                                     synthesis and adrenocorticotropin
      binding protein from bovine
                                                     secretion, reversal by atropine
      cardiac mitochondrial matrix,
                                                     (murine pituitary tumor cells),
      113, 633
                                                     114, 289
  Zn<sup>2+</sup> binding (human brain), 114,
                                               Carbamoyl-phosphate synthetase (ammonia)
      1138
                                                 inactivation by elastase, effect on
Calmodulin-binding proteins
                                                     substrate binding (rat liver).
  heat-stable, isolation and
                                                     117, 238
      characterization (bovine cardiac
                                               Carbamoyl-phosphate synthetase (gluta-
      mitochondrial matrix), 113, 633
                                                     mine-hydrolyzing)
Calmodulin receptors
                                                 decrease in diabetic liver, insulin
  during cell tansformation induced by
                                                     stimulatory effect, prevention by
      Rous sarcoma virus temperature-
                                                     actinomycin (rat), <u>114</u>, 255
      sensitive mutant, 112, 647
                                               Carbamylcholine
Cancer
                                                 acetylcholine receptor photoaffinity
  breast, cell growth inhibition by
                                                      labeling by azido-phencyclidine,
      calcitonin, dibutyryl cAMP, and
                                                     species differences (Torpedo ca-
       1,25-dihydroxyvitamin Da (hu-
                                                     lifornica, T. marmorata, T. ocel-
  mán), 110, 235
cellular oncogenes c-Ha-ras and
                                                     lata), 113, 723
      c-Ki-ras, hypomethylation in pri-
                                                 inositol phosphate production
      mary tumors (human), 111, 47
                                                     stimulation (rat pancreatic is-
  ganglioside, detection by monoclonal
                                                      lets), 116, 9
      antibody to sialosyla2>6-
                                               Carbohydrates
  galactoysl residue, 113, 791 pancreatic, glycolipid antigen
                                                 chain in vitamin D-binding proteins,
                                                      isolation and characterization
       isolation by monoclonal antibody
                                                      (human), 117, 324
       binding, characterization by mass
                                                 dietary, high level, inhibition
       spectrometry and NMR (human),
                                                     of hydroxymethylglutaryl-CoA
       110, 383
                                                     reductase and cholesterol
Candicidin D
                                                      synthesis (rat liver), <u>113</u>, 888
  and lipid vesicle interactions,
                                                 α-galactosyl residue, antigenic
       circular dichroism spectroscopy,
                                                     determinant (human ovarian germ
       116, 520
                                                      cell tumor), 115, 268
Candida albicans
                                               Carbon
   trimethionine uptake, irreversible
                                                 inorganic, accumulation during
       inhibition by photoaffinity label
                                                      photosynthesis in protein carba-
       upon uv irradiation, 110, 884
                                                     mate form (Euglena gracilis),
Candida boidinii
                                                     111, 544
  carbon monoxide-sensitive mono-
                                               Carbon monoxide
       oxygenase in cell-free extracts,
                                                 binding to
       di- and trimethylamine oxidation,
                                                   hemocyanin, positive cooperativity
       113, 900
                                                      (Scylla serrata), 116, 291
Candida tropicalis
                                                   hemoglobin A subunits in solution
   and Schizosaccharomyces pombe, plasma
                                                      and red cells, infrared spectros-copy (human), <u>116</u>, 719
       membrane ATPase, antigenic rela-
       tionship, <u>115</u>, 1114
                                               Carbon monoxide dehydrogenase
 Captopril
                                                 Ni(III) containing, Ni(III)-carbon
   binding to membrane-associated
                                                     species formation, EPR spectra
       angiotensin-binding enzyme (rat
                                                      (Acetobacterium woodii, Clostri-
       tissues), <u>112</u>, 1027
                                                     dium thermoaceticum), 115, 658
 Carbachol
   effect on intracellular free Ca<sup>2+</sup>
                                               Carbon tetrachloride
       concentration (murine pancreatic
                                                 -exposed hepatocytes, ultrastructural changes (rat), <u>114</u>, 511
       acini), 117, 122
```

```
(rat liver microsome), 117, 367
  single intraperitoneal injection,
       choline kinase induction, inhibi-
       tion by actinomycin D (rat hepa-
       tic cytosol), 111, 683
Carbonyl cyanide m-chlorophenylhydrazone
  effect on oxygen and nitrite electron
  flow distribution (Paracoccus de-
nitrificans), 117, 252
growth inhibition of mutants
       defective in respiration-coupled
       Na<sup>+</sup> pump (Vibrio alginolyti-
cus), 114, 113
Y-Carboxyglutamic acid
  -containing protein, purification
       from demineralized organic bone
       matrix (bovine), <u>117</u>, 765
  decreased content in femoral bone and
       renal cortex in vitamin D defi-
       ciency (rat), 113, 294
  removal from bovine factor X, effect
       on activation by snake venom protein XCP, \underline{111}, \underline{14}
Carboxyl groups
  localization in retinal chromophore
       vicinity (bacteriorhopsin), 114,
       872; erratum, 115, 407
Carboxylmethylation
  protein, developmental changes, role
       in benzodiazepine receptor pro-
       tein maturation (rat brain), 116,
Carcinoembryonic antigens, see
       Antigens, carcinoembryonic
Carcinogenesis
  7,12-dimethylbenz[a]anthracene- or
       12-0-tetradecanoylphorbol-13-
       aceTate-dependent inhibition by
       1\alpha,25-dihydroxyvitamin D_3
       (murine skin), <u>116</u>, 605
  hepatocyte nodule cytosolic
       polypeptides, electrophoretic pattern (rat liver), \underline{117}, 740
  -linked aryl hydrocarbon hydroxylase
       and quanylate cyclase, stimula-
       tion by food coloring, amaranth,
       and carmine (rat liver), 111, 409
Carcinogens
  aminoazo dyes, N-oxidation by
      mixed-function amine oxidase pur-
       ified from rat hepatic micro-
       somes, 110, 640
  arylamines, prostaglandin H
       synthase-mediated reaction with
       tRNA and homopolyribonucleotides,
       111, 96
  dietary, free radical production
       decrease (Drosophila melanogas-
       <u>ter), 112, 602</u>
  -DNA adduct, identification in rat
       liver as N<sup>5</sup>-methyl-N<sup>5</sup>-formyl-
```

metabolism to dichloromethyl carbene

```
2,5,6-triamino-4-hydroxypyrimidine,
      110, 625
  preneoplastic hepatic lesion
      induction, properties of in-
creased glutathione transferase A
       form (rat), 112, 20
Carcinoma
  differentiation, induction by orni-
       thine decarboxylase inhibition
       (murine embryo), 114,
  renal cell, calmodulin role (human), 114, 843
Cardiocytes, <u>see</u> Myocytes, cardiac
Cardiolipin
  strong activation of lysosomal
      cathepsin D (porcine adrenal cor-
      tex), 110, 934
Cardiotoxicity
  adriamycin, detection by ^{31}P NMR (rat perfused heart), 110, 339
  anthraquinone antitumor agent, role
      of lipid peroxidation induction
       in heart (mouse ), <u>110</u>, 399
  daunorubicin-induced stimulation of
      DT-diaphorase and glutathione
       transferase in neonatal beating
      cells culture (rat), 110, 364
Carmine
  stimulation of carcinogenesis-linked
       aryl hydrocarbon hydroxylase and
       guanylate cyclase (rat liver),
      Ĭ11, 409
s-Carotene
  intrinsic fluorescence in solution
       and in lipid/water mixtures, 113,
      102
Casein
  mRNA accumulation, insulin and
      prolactin requirement (rat), 116,
      994
  synthesis in mammary explants
    inhibition by 5-azacytidine
      (mouse), 111, 150
    with insulin and prolactin,
      inhibition by cortisol, prosta-
      glandin effects (mouse), 111, 1059
    insulin-induced, simulation by
      anti-insulin receptor serum
(pregnant mouse), <u>111</u>, 988
Casein kinase 1
  human fibrinogen phosphorylation (rat
      liver cytosol), 117, 631
Castor cake
  anaerobic digestion by bovine dung
      mixed culture, biogas production,
      110, 32
Castration
  inhibitory effect on prostate-
      specific mRNA levels (rat), 111,
```

```
Catalase
                                                         somes (rat brain), 112, 817
  and H<sub>2</sub>O<sub>2</sub> production, riboflavin
                                                  Cell culture
      deficiency and repletion effects
                                                    conditions, effect on glutathione
       (mammalian), <u>117</u>, 788
                                                         content (human A549 cells), 114,
  probe for OH· radicals, superoxide-
       dependent lipoperoxidation (bo-
                                                    synchronized, of cell lines sensitive
                                                         to interferon antiproliferative
       vine, human), 117, 901
                                                         effect, calmodulin decrease by
Cataract
  crystallin crosslinking, induction in
                                                         interferon in media (canine, hu-
                                                        man), 111, 430
       vitro by heme-undecapeptide from
      cytochrome c with H_2O_2 (human lens), 113, 592
                                                  Cell cycle
                                                    G<sub>1</sub> phase, histone mRNA increase
  low-molecular-weight polypeptides in
                                                         induced by protein synthesis in-
                                                         hibition (HeLa cells), <u>114</u>, 131
       nuclei during development (human
       lens), 113, 65
                                                    high-mobility-group protein 17
                                                    phosphorylation (HeLa cells), 111, 1001; erratum, 113, 730 initiation signals, and rRNA
Catecholamines
  and aminochromes, effect on dihydro-
       pteridine reductase inhibition
                                                         accumulation (Swiss 3T3 cells),
       (human brain), <u>113</u>, 895
                                                         117, 223
  oxidation products, see Aminochromes
                                                    nonhistone protein ADP-ribosylation
  storage complex, divalent cation-
                                                    (HeLa cells), <u>115</u>, 938
nonpolysomal mRNAs (mouse sarcoma-180
       dependent (chromaffin granules),
       116, 663
                                                         ascites cells), <u>113</u>, 923
Cathepsin B
                                                  Cell killing
  inhibition by low-molecular-weight
                                                    Ca-dependent, induction by mercuric
       inhibitor for lysosomal cysteine
                                                         chloride (murine fibroblasts),
       proteinases (human serum), 110,
                                                         110, 758
                                                  Cell pressure
  myelin basic protein degradation,
                                                     intra-, changes associated with action
       suppression by cerebrocystatin
                                                         potential production (giant squid
       (rat brain), <u>112</u>, 1000
                                                         axon), 114, 1106
  pyruvate kinase limited proteolysis
                                                  Cell proliferation

Ca<sup>2+</sup>-deficient medium, correlation

with Ca<sup>2+</sup>/phospholipid-depen-
       causing enhanced requirement for
       fructose 1,6-bisphosphate (rat
       liver), 110, 682
                                                         dent protein kinase activity (rat
  stimulation in vivo by leupeptin
                                                         liver), <u>115</u>, 383
       (murine heart, kidney, liver,
                                                  Cell wall
       striated muscle), <u>110</u>, 332;
                                                    hydroxyprolin-rich glycoprotein
       erratum, 112, 347
                                                         insolubilization controlled by
Cathepsin D
                                                         peroxidase/ascorbate oxidase sys-
  lysosomal, activation by phospho-
                                                         tem (carrot root slices), 112, 161
       lipids extracted from mitochon-
                                                  Cellulase
       drial-lysosomal fraction (porcine
                                                    N-terminal sequence, homology with
       adrenal cortex), 110, 934
                                                         site (Schizophyllum commune), 116, 408
                                                         hen egg-white lysozyme active
Cathepsin H
   inhibition by low-molecular-weight
       inhibitor for lysosomal cysteine
                                                  Cerebrocystatin
       proteinase (human serum), 110, 449
                                                     suppression of myelin basic protein
                                                         degradation by cathepsin B (rat
  divalent
                                                         brain), <u>112</u>, 1000
     -dependent catecholamine storage
                                                  Ceruloplasmin, see Ferroxidase CGS 13080, see Imidazo[1,5-a]pyridine-
       complex (chromaffin granules),
       116, 663
                                                         5-hexanoic acid
     effect on cyanobacterial glutamine
                                                  Chalcone
       synthetase (Anabaena cylindrica),
                                                    derivatives, reduction of benzo[a]-
       114, 206
                                                         pyrene mutagenic activity
  effect on F<sub>1</sub>-ATPase activity,
                                                         (Salmonella typhimurium), 112,
       mechanism (bovine heart), 113, 273
                                                         833; erratum, 115, 406
CDPdiacylglycerol-inositol 3-phospha-
tidyltransferase
                                                  Charcoal
                                                    dextran-coated, uterine cytosolic
  \mathrm{Mn}^{2+}\mathrm{-dependent} activity in synapto-
```

factor elimination, effect on

1983 Cumulative

```
estradiol receptor stabilization
                                                   conversion to pyrrolidinylnaphtho-
                                                        quinone (rat hepatocytes), 112,
       (rat), 110, 713
Chemiluminescence
  bleomycin activated by Fe<sup>2+</sup> inter-
                                                 2-Chloroethylaminobenzoquinone
       action, prevention by DNA, 112,
                                                   derivatives, conversion to aziridine
                                                        by microsomal enzymes (rat liver), \underline{110}, 220
Chemotactic activity
                                                 p-Chloromercuribenzenesulfonate
  leukotrine B<sub>4</sub>, increase after
       improved purification (human lym-
                                                   inhibition of nitrobenzyl-thiono-
       phocytes), 110, 842
                                                        sine-insensitive uridine
Chemotactic factors
                                                        transport (human lympho-
                                                        blastoid, murine leukemia cells),
  neutrophil stimulation, effect on
       intracellular free Ca<sup>2+</sup> in-
                                                        110, 417
       crease (human, rabbit), 113, 44
                                                 Chloromethyl ketones
Chemotactic peptides
                                                   inhibition of neutrophil sulfhydryl
  synthetic f-Met-Leu-Phe, induction of
                                                        groups and superoxide radical
                                                        production (human), <u>112</u>, 671
       rapid decrease in phosphatidyl-
       inositol 4,5-bisphosphate and
                                                 4-Chloro-7-nitro-2,1,3-benzoxadiazole
                                                   -labeled tyrosine residue in MF<sub>1</sub>-ATPase, identification
       phosphatidylinositol 4-monophos-
       phate (rabbit neutrophils), 112,
                                                        (bovine heart), <u>116</u>, 599
       957
Chemotaxis
                                                 Chloroperoxidase, <u>see</u> Chloride
  methyl-accepting proteins, serine and
                                                        peroxidase
                                                 2[5(4-Chlorophenyl)pentyl]oxirane-2-car-
      aspartate chemoreceptors, ion
      channel selection (Escherichia
                                                        boxylate
                                                   effect on fatty acid and glucose
      coli, Salmonella typhimurium),
      115, 648
                                                        metabolism (perfused rat heart).
Chitosans
                                                        117, 653
                                                 Chlorophy 11
  stimulation of
                                                   synthesis in etioplasts after
    pisatin synthesis in pea pods, 110,
                                                        illumination in vitro and in vivo (cucumber cotyledon), \underline{111}, 740
    proteinase inhibitor synthesis in
                                                 Chloroplasts
      tomato leaves, 110, 194
                                                   antimycin A inhibitory effect on
Chloramphenicol
                                                        electrochromic absorbance and
  prevention of furazolidone-induced
                                                        photosystem I (pea), <u>111</u>, 619
       prophage and filament formation
                                                   C_3 and C_4, ATP-phospho-enoT-
       (Vibrio cholera), 112, 1106
                                                        pyruvate counter-transport system
Chloride ion
                                                        (maize, pea), <u>116</u>, 945
  effect on phenylglyoxal-sensitive
                                                 3-[(3-Cholamidopropyl)-dimethyl-
       sites in erythrocyte membrane
       (human), <u>11</u>0, 616
                                                        ammonio]-1-propane sulfonate
                                                   -solubilized muscarinic acetylcholine
  -stimulated chloroperoxidase
       activity, free hypohalous acid formation, 116, 873
                                                        receptors, glycoprotein nature
                                                        (bovine cerebral cortex), 115, 814
Chloride peroxidase
                                                 Chloroquine
  dimethyl sulfoxide substrate
                                                   protection of cytosolic glucocorti-
      properties (Caldariomyces fuma-
                                                        coid receptors from thermal and
  go), 116, 82
halide-stimulated activity, free
                                                        salt-induced inactivation (rat
                                                        liver), 112, 488
      hypohalous acid formation, 116,
                                                 Cholecystokinin
      873
                                                   in brain and gastrointestinal tract
  halohydrin isomer formation from
                                                        during postnatal development
      allyl bromide or chloride (Cal-
                                                        (rat), 112, 891
      dariomyces fumago), 110, 880
                                                   effect on intracellular free Ca<sup>2+</sup>
  primary alcohol peroxide oxidation to
                                                        concentration (murine pancreatic
      aldehydes (Caldariomyces fumago),
                                                        acini), <u>117</u>, 122
                                                   fragment CCK_{27-33}, <sup>1</sup>H NMR, 114,
      114, 1104
3-Chloro-D-alanine chloride-lyase
                                                        705
  synthesis of D-cysteine-related amino
                                                 Cholera toxin
      acids (Pseudomonas putida CR
1-1), <u>111, 809</u>
                                                   subunit A<sub>1</sub>, location and amino acid
                                                        sequence around ADP-ribosylation
4-Chlorobutylaminonaphthoquinone
                                                        site, 116, 341
```

```
Cholera toxin receptor
                                                          nol, and propranolol (human fi-
                                                          broblasts), 1<u>12</u>, 795
  defective in 1-8 rat thyroid tumor
                                                   Cholesterol 7 a-hydroxylase, see
Phenol 2 monooxygenase
       line, function restoration by
       higher order gangliosides, 110,
                                                   Choline
       772
                                                     from calf brain extract, inhibition
5\beta-Cholestane-3\alpha, 7\alpha-diol 12\alpha-
                                                          of α-bungarotoxin binding to
       hydroxylase
                                                          brain membrane (chicken), 111, 82
  activity of cytochrome P-450<sub>LM</sub>,
                                                     dietary deficiency, effect on UDPglucuronosyltransferase stimu-
      regulation by microsomal and
      cytosolic protein fractions from
                                                          lation (rat hepatic microsomes),
      rabbit liver, 113, 212
                                                          <u>114</u>, 418
Cholesterol
                                                      effect on guanine nucleotide
  accumulation
                                                          regulation of quinuclidinyl ben-
    in estradiol-deprived luteal cells,
                                                          zilate binding to muscarinic ace-
       connection with progestin produc-
                                                          tylcholine receptors (canine,
       tion decrease (pseudopregnant
                                                          frog, murine, rat heart), 113, 280
    rabbit), 113, 1026 in spleen of Niemann-Pick mice,
                                                   Choline kinase
                                                      induction by carbon tetrachloride
       decrease after bone marrow trans-
                                                          intoxication, inhibition by actinomycin D (rat hepatic cyto-
  plantation, 113, 605
composition, ethanol effect (bovine
                                                   sol), <u>111</u>, 683
Cholinergic receptors, <u>see</u>
      HeLa cells), <u>114</u>, 985
  and derivatives, interactions with
                                                          Acetylcholine receptors
      lipid bilayers, 113, 799
                                                   Chondrocytes
  displacement of phenothiazines from
                                                     differentiation in limb bud cell
      phospholipid binding sites, 114,
                                                          culture, enhancement by poly(ADP-
       1001
                                                          ribose) synthesis inhibitors
  effect on mechanical properties of
                                                          (chicken), <u>111</u>, 750
      phospholipid unilamellar vesi-
  cles, 110, 320
ergosterol sparing in growth of oxygen-deprived Saccharomyces cerevisiae, 112, 47
                                                   Chondroitin sulfates
                                                      synthesis in ovarian follicular and
                                                          luteal tissues during estrous
                                                          cycle (guinea pig), <u>111</u>, 574
                                                   Choriocarcinoma cells
  20-hydroperoxy derivatives, transient
                                                      placental akaline phosphatase
      species during cytochrome
                                                          biosynthesis and processing
      P-450_{SCC}-mediated peroxidative hydroxylation, <u>112</u>, 655
                                                          (human), <u>111</u>, 611
                                                   Chromaffin granules
  inhibition of sphingomyelin degra-
                                                      Ca<sup>2+</sup> accumulation
      dation by fibroblasts with slight
                                                        ATP-stimulated (adrenal medulla),
      decrease in sphingomyelinase ac-
                                                          117, 245
      tivity (human), 112, 860
                                                        enhancement by synexin-like protein
  synthesis
                                                          from adrenal medullary or liver
    from acetate, decrease by cAMP.
                                                          (bovine), 112, 147
       theophylline, and isoproterenol,
                                                      catecholamine storage complex.
       increase by propranolol (human
                                                          divalent cation-dependence, 116,
      fibroblasts), 112, 795
    in inherited diabetes (murine intestine and liver), 113, 638
                                                      exocytosis-like interaction with
                                                          adrenal medullary plasma mem-
    inhibition by
                                                          branes, role of protein phos-
      AY9944, DNA synthesis reduction
                                                          phorylation (bovine), 110, 55
         in lymphocytes(human peri-
                                                     synexin binding, Ca<sup>2+</sup> concentration
         pheral blood), 110, 82
      high carbohydrate low fat
                                                          dependence, pH sensitivity (bovine liver), 114, 355
         diet (rat liver), 113, 888
Cholesterol esters
                                                      synexin-induced aggregation and
  accumulation in estradiol-deprived
                                                          synexin secretion, inhibition by
                                                          phenothiazine drugs (bovine adre-
nal medulla), 113, 908
       luteal cells, effect on progestin
       production (pseudopregnant rab-
bit), 113, 1026
                                                   Chromatin
```

synthesis from oleate, inhibition by

cAMP, theophylline, isoprotere-

HMG14 and HMB17 proteins, interaction

with histone H1, crosslinking

kinetics, <u>117</u>, 817 kinase, Ca²⁺-independent form organization with trypsin immobilized conversion, 110, 701 on collagen membrane, <u>114</u>, 1169 promegestone localization in cultured strong inhibition by phosphonofluoridates (bovine), 1085 hepatoma cells, 110, 719 replicating, assembly kinetics, Cibacron Blue P3GA alkaline phosphatase binding (human prenucleosomal and nucleosomal intestine, liver), 111, 36 DNA characterization (CHO cells), Cigarette smoke 110, 811 effect on lipoxygenase and cyclosolubility increase by in vitro or in oxygenase pathways (rat platevivo treatment with triiodolets), 115, 499 thyronine and angiotensin (rat impairment of high-density lipohepatic nuclei), 110, 61 protein uptake (pigeon), 112, 843 solubilization, inhibition by Cilostamide tosyl-lysine chloromethyl ketone and AAL 05 analog, inhibition of and tosylamino-phenylethyl sul-3':5'-cyclic-nucleotide phosphofonyl fluoride (rabbit thymus diesterase, tissue and substrate nuclei), <u>110</u>, 216 specificity (bovine aorta, human platelets), 113, 954
Circular dichroism Chromatography affinity, see Affinity chromatography hyaluronic acid fractionation on magnetic spectra in Soret region of DEAE-Sephacel, 112, 168 methemoglobin complexes and sub-Chromatophores units, correlation with spin antimycin A-insensitive state of ferric heme (human), ubiquinol-cytochrome c reductase, 114, 318 purification and properties (Rho-dopseudomonas sphaeroides), 112, Cisplatin, see Diamminedichloroplatinum Citrate 450 protective mechanism against Ca²⁺ and phosphate flux damage in Chromophore 450-455 reductase liver mitochondria (rat), <u>115</u>, 749 catalytic component of NADPH depen-Citrate lyase dent oxidoreductase in phorbol acyl-carrier protein subunit, myristic acetate-stimulated properties of S-acylated residues neutrophils (human), 110, 873 (Klebsiella aerogen<u>es</u>), <u>114</u>, 310 endoreduplication, induction by cytosine (Chinese hamster V79 cells), 113, 142 essential arginine residues in transferase and lyase subunits Chronic granulomatous disease (Klebsiella aerogenes), 111, 490 chromophore 450-455 reductase, Citrate (si)-synthase absence in NADPH-dependent 05 affinity chromatography on Procion generating oxidoreductase in Red-agarose (cell-free extracts stimulated neutrophils (human), from bacteria, yeast, and porcine 110, 873 liver), 112, 1021 Chymopapain Clathrin active-site substrate conformation, -coated vesicles, calmodulin-NADH resonance Raman spectra comparisemihydroascorbate reductase interactions (rat liver), 115, 952 son with papain, ficin, and bromelain, 117, 725 Clostridium perfringens Chymotrypsin enterotoxin, binding to 50,000 Mr protein from brush-border membovine, amino acid sequence, branes (rabbit), 112, 1099 comparison with insect endopeptidase II, 110, 1 Cluster analysis enzyme-substrate interactions in complex with $\overline{\alpha_2}$ -macroglobulin, free thiol group release and lonucleosidediphosphatase of Golgi calization, <u>111</u>, 964 membranes (rat hepatocytes), 113, limited proteolysis of phenylalanine 178; erratum, 114, 1200 Coaqulation factors hydroxylase, effects of phenylalanine and tetrahydrobiopterin, IX, IX_a , and X, binding to aortic 110, 919 endothelial cells in culture (bovine), <u>111</u>, 723 α-Chymotrypsin

X, activation \overline{by} snake venom protein

XPC, role of y-carboxyglutamic

limited proteolysis of Ca²⁺-

dependent myosin light chain

```
acid domain (bovine), 111, 14
                                                        bone, pyridinoline in crosslinks
Cobalt(III)
                                                        (chicken), 113, 975
  complexes with bleomycin, hydro-
                                                   type I
      peroxide bound to cobalt, fast
                                                     c-terminal crosslinking region,
                                                        neutral proteinase effect (húman
       atom bombardment spectra, 110, 959
                                                     gingival fibroblasts), <u>114</u>, 1064 target for drug delivery in injured
Cobalt(III) hexaamine
  polyamine-like effect on cAMP-
                                                        blood vessel wall (human aortal
       independent protein kinases (rat
                                                        denuded intima), <u>116</u>, 99
       liver, prostate), 112, 139
                                                   type III, increased proportion in
Cobalt ion
                                                        dystrophic skeletal muscle (chicken), 111, 933
  uptake by crustacean nerve fiber in
       resting state and during potas-
                                                     target for drug delivery in injured
       sium depolarization, radioisotope
                                                        blood vessel wall (human aortal
       and NMR, (Collinectes sapidus),
      111, 560
                                                        denuded intima), 116, 99
Colcemid
                                                   type IV, identification in Descemet's
  inhibition of brain-specific S100
                                                       membranes (bovine), 116, 619
      protein synthesis in colcemid-
                                                 Collagenase
      resistant mutant sublines of
                                                   tryptic peptide with active site
       glial cells (rat), <u>112</u>, 73
                                                        serine residue, isolation and
Colchicine
                                                 amino acid sequence (Hypoderma lineatum), 112, 907
Colony stimulating factor
  -tubulin binding
    dapsone effect (bovine brain), 116,
                                                   isolation in milk (human), 114, 797
    enhancement by poly(L-lysine), 113,
                                                 Compactin
       384
                                                   -resistant mutants, insulin receptor
    at 5°C (bovine renal medulla),
                                                        level alteration and endocytosis
       116, 866
                                                        activity (Chinese hamster), 117,
  derivatives coupled to CNBr-Sepharose
                                                        13
       4B, use for tubulin purification
                                                 Complementation tests
       by affinity chromatography (rat
                                                   between fibroblast strains with known
      pancreas), 111, 253
                                                        defects in branched-chain amino
  inhibition of glucose-stimulated
                                                        acid catabolism and cell lines
       phosphatidylinositol turnover and
                                                        with studied defects (human),
       insulin secretion (rat pancreatic
                                                        114, 175
       islets), 112, 419
                                                 Complements
  uptake by glial cells, decrease in
                                                   iC3b-forming thiol protease,
       colcemid-resistant mutant sub-
                                                        isolation (guinea pig peritoneal
       lines (rat), 112, 73
                                                        polymorphonuclear leukocytes),
Colicin A
                                                        <u>117</u>, 413
                                                   SC5-9 complex, specific β-endorphin binding sites in endotoxin-

    doped planar lipid bilayers,

       time- and voltage-dependent con-
       ductance classes, 113, 765
                                                        treated human serum, 113, 839
                                                 Concanavalin A
  endothelial cell, identification in
                                                   binding by synaptosomes, increase
       Descemet's membranes (bovine),
                                                        after Triton X-100 treatment
       116, 619
                                                        (calf brain intact vesicles).
  membranes, chromatin organization
                                                        110, 804
       with immobilized trypsin, 114,
                                                   Ca<sup>2+</sup>, Zn<sup>2+</sup> solutions, <sup>43</sup>Ca and <sup>67</sup>Zn NMR, 115, 22 demetalized, conformational transi-
       1169
  from placenta of diabetic vs normal
       subjects, nonenzymatic glycosyl-
                                                   tion kinetics, <u>112</u>, 595 inhibition of Friend erythroleukemia
       ation and platelet-aggregating
       activity, 111, 602
                                                        cell differentiation induced by
  production, modulation by Na+
                                                        dimethyl sulfoxide, 110, 228
       (human fibroblast cell culture),
                                                   T-cell proliferation induction,
       117, 313
                                                        inhibition by 5'-deoxy-5'-methyl-
  synthesis in corneal endothelial cell
                                                        thioadenosine, mechanism (rat),
       culture, stimulation by vitamin A
                                                 113, 425
Conformation
       (rabbit), 114, 395
  tryptic peptides from nonmineralized
                                                   angiotensin II in acidic aqueous
```

and mineralized compartments of

1983 Cumulative Subject Index

```
types, <sup>1</sup>H NMR (Rhus vernici-
      solutions, clustering analysis,
                                                       fera), 111, 824
      112, 339
  bacteriophage M13 protein B, in
                                                Coprinus cinereus
      filaments, I-forms, and
                                                  5-S ribosomal RNA nucleotide
                                                       sequence, 116, 148
      spheroids, circular dichroism,
      112, 349
                                                Cordycepin
                                                  (A2'p)<sub>2</sub>A analog as prodrug (human
 β-turn fused with oxy-analog of
                                                colon), 115, 137
Cordycepin 5'-triphosphate
      a-turn, detection in protected
      analog of gramicidin A C-terminal
                                                  conversion to 2',5'-A4 tetramer
      dipeptide, X-ray diffraction,
      <u>112</u>, 1056
                                                       analog in rabbit reticulocyte
 Ca<sup>2+</sup>-calmodulin temperature-
dependence, intrinsic
                                                       lysate, protein synthesis inhibi-
                                                       tion, <u>111</u>, 205; <u>erratum</u>, <u>114</u>, 1200
      fluorescence, 111, 301
                                                Corticosteroids
                                                  -binding protein, intracellular
  demetalized concanavalin A transi-
                                                       ketoconazole binding (Candida al-
      tions, kinetics, 112, 595
                                                       bicans), 117, 43
  enkephalin cyclic analogs in aqueous
      solution, fluorescence study, 114, 268
                                                Corticosterone
                                                  plasma, corticotropin-induced
                                                       increase, elimination by antisera
 HC-toxin, NMR (Helminthosporium
  carbonum), 111, 398; 113, 10 narasin acid, solvent polarity-
                                                       to v3-melanotropin (normoten-
                                                       sive, spontaneously hypertensive
                                                       rats), <u>110</u>, 357
      dependent equilibrium, NMR, 113,
      832
                                                Corticotropin, <u>see</u> Adrenocorticotropin
Conjugated dienes
                                                Corticotropin-releasing factor
  production by 2,3,7,8-tetra-
                                                   adrenocorticotropin release induction
      chlorodibenzo-p-dioxin-induced
                                                       in pituitary cells <u>in vitro</u>, epi-
      lipoperoxidation, spectrophotometry (rat liver), 111, 854
                                                       nephrine effect (rat), 110, 456
                                                  pituitary cell pretreatment, effect
Copper ion
                                                       on reduction of factor ability to
                                                       restimulate cAMP formation and
  apotyrosinase reconstitution after
      isolation from Neurospora crassa,
                                                       adrenocorticotropin release
                                                       (rat), <u>111</u>, 919
      reactions with Cu<sup>+</sup> and Ca<sup>2+</sup>.
                                                  radioiodinated analog, high-affinity
      110, 313
                                                       binding to receptors (rat anteri-
  binuclear site in T2D laccase
                                                       or pituitary gland), 110, 602
    Cu(I) determination by X-ray
                                                Corticotropin-releasing factor receptors
      absorption edge spectroscopy
                                                  desensitization in anterior pituitary
    (Rhus vernicifera), 112, 737 EXAFS analysis in met laccase and
                                                       cells by pretreatment with corti-
                                                       cotropin-releasing factor (rat),
       azide-bound derivatives (Rhus
                                                       111, 919
    vernicifera), 112, 746
nitrite reactivity, EPR (Rhus
                                                  properties, hormonal regulation, role
                                                       in adrenocorticotropin release
       vernicifera), <u>112</u>, 729
                                                       (rat anterior pituitary gland),
  -induced hemolysis, 02 requirement
                                                       110, 602
       (rabbit erythrocytes), 115, 680
                                                Cortisol
  inhibition of gonadotropin-releasing
                                                  inhibition of \alpha-lactalbumin synthesis
      hormone binding to pituitary mem-
                                                       and mRNA accumulation, reversal
       brane preparations (rat), 112, 306
                                                       by prostaglandins E_2 or F_2
  plasma, decrease by copper-chelating
                                                       (murine mammary explants), 111,
       drugs, effect on ferroxidase ac-
                                                       1059
      tivity, anemia induction (rat), 113, 127
                                                   serum, increase by cytokine
                                                       preparation injection (rat), 112,
  stimulation of luteinizing hormone
       release from immature female pi-
                                                 Cow dung
       tuitaries (rat), <u>112</u>, 306
                                                   mixed bacterial culture isolation for
  substitution after Zn, effect on
                                                        anaerobic digestion of castor
       aminopeptidase activity (Aeromo-
                                                       cake to produce biogas, 110, 32
       nas), 114, 646
                                                 C-peptidase
  surrounding in plantacyanin, NMR
                                                   immunoreactivity in plasma, in vitro
```

785

increase by trypsin (human), 111,

spectra (cucumber), <u>117</u>, 385

in T2D laccase, function of different

Creatine kinase and ATP: kinetic properties, functional roles, and compart- mentation (rabbit glycerinated	proteolysis and domain-specific antibodies, fibronectin domain structure identification (human pericellular matrix, plasma),
muscle fiber), 114, 785	116, 534
Creatine kinase	Cyclic AMP
estrogen-induced in uterine cytosol,	accumulation in
purification and properties (im-	anterior pituitary cells, contico-
mature rat), 111, 156; erratum,	tropin-releasing factor-induced
<u>112</u> , 1112	reduction (rat), <u>111</u> , 919
inhibition by 2,4-dinitrofluoro-	anterior pituitary tumor cells,
benzene, correlation with muscle	forskolin- and isoproterenol-
protein and lipid synthesis inhi-	stimulated, inhibition by soma-
bition (rat quarter diaphragm),	tostatin, pertussis toxin effect (murine), 115, 794
111, 884	pancreatic adenocarcinoma cells,
mitochondrial and M-subunit, transla-	response to secretin and vaso-
tion <u>in vitro</u> from myocardial mRNA (canine), <u>110</u> , 967	active intestinal peptide, in-
Creatine phosphokinase, see Creatine	crease during differentiation in
kinase	culture (human), 111, 958
Crosslinking	parotid cells in vitro
Ca-binding phosphoproteins by	stimulation by forskolin (mouse),
naturally occurring N - and	<u>111</u> , 21
N ^T -histidinoalanine (Rangia	stimulation by isoproterenol,
cuneata extrapallial fluid), 114,	augmentation by forskolin
304	(mouse), <u>111</u> , 21
hydroxyprolin-rich glycoprotein	pituitary cells, corticotropin-
during insolubilization in cell	releasing factor-induced, epinephrine effect (rat), 110, 456
wall (carrot root slices), <u>112</u> ,	analogs, inhibition of tumor
161	promoter-induced interleukin 2
nonmineralized collagen by pyridinoline (chicken), 113, 975	production by thymocytes (mouse),
oligomycin-sensitive ATPase by	114, 93
3'-arylazido-8-azido ATP (bovine	binding activity of type 1
cardiac mitochondria), 111, 732	cAMP-dependent protein kinase
prothrombin by bifunctional alkaline	regulatory subunit, streptozoto-
reagents, Ca effect, <u>111</u> , 213	cin-induced diabetés effect (rat
Crysrallins	liver), <u>117</u> , 794
H ₂ O ₂ -mediated crosslinking by	during cardiac cycle, oscillation
heme-undecapeptide from cyto-	with highest level at systole
chrome c, cataractogenesis impli-	(isolated rat heart model), 111 ,
cations (human lens), 113, 592	450
Cu-amine oxidases, see Amine oxidases	-dependent protein kinase, acetyl CoA
(copper-containing) Cumene hydroperoxide	carboxylase phosphorylation (rat liver), 117, 435
stimulation of microsomal oxygen	effect on
consumption, role of cytochrome	insulin binding, post-receptor
P-450 (rat liver), 110, 646	insulin resistance of glucose
Cutinase	transport (rat adipocytes), <u>115</u> ,
active site region primary structure	398
(fungal), <u>114</u> , 1017	intestinal folate transport (rat
Cyanide	jejunum), <u>115</u> , 756
effect on glycogenolysis and phos-	-independent protein kinase, tightly
phorylase activity (rat hepato-	bound to DNA, characterization (rat liver nuclei), 117, 610
cytes), <u>115</u> , 1033 Cyanobacteria	inhibition of
sym-homospermidine accumulation in	insulin binding to adipocytes due
nitrogen-fixing species, 112, 606	to β-adrenergic receptor stimula-
Cyanogen sulfide	tion (rat), <u>112</u> , 972
effect on lactoperoxidase activity,	low-density lipoprotein binding and
<u>116</u> , 568	internalization, synthesis of
<u>S</u> -CyanyTation	cholesterol and cholesteryl es-

```
ters (human fibroblasts), <u>112</u>, 795 serotonin release, Ca<sup>2+</sup> uptake,
                                                          5'-deoxy-5'-methylthioadenosine in
                                                            T cells, correlation with conca-
                                                             navalin A-induced proliferation
        and phospholipase activity in
                                                       inhibition (rat), 113, 425 insulin-activated, regulation by
        thrombin-stimulated platelets
        (human), 112, 693
                                                            pertussis toxin (3T32-L1 adipo-
   -mediated cGMP response and folic
                                                            cytes), 116, 593
        acid adaptation (Dictyostelium),
                                                       isozymes, activation by Ca<sup>2+</sup>-
        <u>115</u>, 130
   secretin and epinephrine effects
                                                            calmodulin in larval brain
                                                            (<u>Drosophila melanogaster</u> wild-
type and <u>dunce</u> mutant), <u>111</u>, 652
        (isolated perfused rat liver).
        115, 743
   production
                                                       stimulation by calmodulin, prevention
     by A23187-stimulated macrophages,
                                                            by calmodulin-binding protein
        inhibition by trifluoperazine and
                                                            from bovine cardiac mitochondrial
        verapamil, role in prostaglandin formation (rat), \underline{114}, 248
                                                            matrix, 11<u>3</u>, 633
                                                     Cyclic nucleotides
     arachidonic acid metabolism (rat
                                                       phospholipase A2 modulation (snake
        peritoneal macrophage), 114, 549
                                                            venom), <u>115</u>, 94
     in pituitary tumor cells, stimula-
                                                     Cyclohexenone
        tion by forskolin, reversal by
                                                       double bond reduction by micro-
        carbachol, role of cholinergic
                                                             organisms (<u>Clostridium</u> sp.,
        muscarinic receptors (mouse),
                                                            Streptomyces strains), 110, 908
        114, 289
                                                     Cycloheximide
     stimulation in platelets, effect on
       thrombin-induced increase in cytoplasmic Ca<sup>2+</sup> (human), 113, 598
                                                       protein synthesis inhibition, effect on histone mRNA in exponentially
                                                             growing and synchronous G<sub>1</sub> HeLa
                                                            cells, 114, 131
  in T cells, 5'-deoxy-5'-methyl-
                                                     Cyclo(histidyT-proline)
       thioadenosine effect (rat), 113,
                                                        identification and characterization
       425
                                                             (rat pancreatic islet), 115, 281
Cyclic AMP phosphodiesterase, see
       3',5'-Cyclic-nucleotide phospho-
diesterase
                                                     Cyclooxygenase
                                                        and arachidonic acid metabolism,
Cyclic-2,3,-diphospho-D-glycerate
                                                             inhibition by anti-inflammatory
  levels in Methanobacterium thermo-
                                                             drugs (rat neutrophils from
       autotrophicum, inorganic
phosphate role, 116, 1125
                                                             reverse passive Arthus reaction
                                                            plural exudates), 112, 586
Cyclic GMP (cGMP)
                                                        pathway, cigarette smoke effect (rat
platelets), <u>115</u>, 499
  cAMP-mediated response and folic acid
       adaptation (Dictyostelium), 115,
                                                     Cysteamine
                                                        effect on intralysosomal pH (normal,
  light-induced hydrolysis by
                                                             cystinotic human fibroblasts).
       3':5'-cyclic-nucleotide phospho-
                                                             116, 154
       diesterase, Ca<sup>2+</sup> dependence
                                                     Cysteine
       (bovine retinal rod outer seq-
                                                        as origin of sulfide sulfure for
       ment), 113, 317
                                                             iron-sulfur proteins (Escherichia
  stimulation of Na<sup>+</sup>,K<sup>+</sup>-ATPase
                                                             co<u>li</u>), <u>112</u>, 66
       (hamster sperm homogenate), 112,
                                                        substrate-protected residues and heme
       132; erratum, <u>1</u>14, 431
                                                            binding in cytochrome P-450<sub>cam</sub> (<u>Pseudomonas putida</u>), <u>T16</u>, 30
3':5'-Cyclic-nucleotide phospho-
       diesterase
                                                     Cysteine proteinase
  Ca<sup>2+</sup>-dependent activation and
                                                       Ca<sup>2+</sup>-dependent, 34,000-dalton
       dectivation (bovine retinal rod
                                                             inhibitor, phenylhydrazine hydro-
       outer segment), <u>113</u>, 317
                                                            chloride effect (rat liver cyto-
  calmodulin-stimulation, dancyl-
                                                     sol), <u>115</u>, 715
L-CysteinylgTycine
       cadaverine effect (bovine heart),
       117, 562
                                                       hydrolysis by erythrocytes, proton NMR study (human), \underline{110}, 305
  inhibition by
    alkoxy-aryl-lactams, tissue and
                                                     Cystic fibrosis
       substrate specificity (bovine
                                                       gastric mucus glycoprotein acetyla-
```

tion increase (human), 113, 286

aorta, human platelets), <u>113</u>, 954

```
Cystine
                                                         lated neutrophils (human), 110,
  accumulation, and intralysosomal pH
                                                         873
       (normal, cystinotic human
                                                  Cytochrome f
       fibroblasts), 116, 154
                                                    -plastocyanin covalently linked
  ^{35}S-labeled, sulfur incorporation
                                                         adduct, preparation with water-
       into biotin (Escherichia coli),
                                                         soluble carbodiimide (spinach,
                                                         turnip), 116, 1000
       110, 243
                                                  Cytochrome o
Cystinosis
                                                    membrane-bound, in 2-octaprenylphenol
  intralysosomal pH, relation to
                                                         hydroxylation to ubiguinone 8
       cystine accumulation (human skin
                                                         (Escherichia coli), 111, 830
       fibroblasts), 116, 154
Cytochrome b5
                                                  Cytochrome oxidase, see Cytochrome c
                                                        oxidase
  effect on cytochrome P-450 activity
       in arylhydrocarbon hydroxylase
                                                  Cytochrome P-450
       system of fetal hepatic micro-
                                                    in arylhydrocarbon hydroxylase
  somes (rat), 113, 59 purification and amino acid sequence
                                                         system, dependence on cytochrome
                                                        bs system (rat fetal hepatic
                                                        microsomes), 113, 59
       (rabbit erythrocytes, liver mi-
       crosomes), 115, 807
                                                    benzo[a]pyrene hydroxylation, effect
                                                        of different inducer forms (As-
Cytochrome \underline{b}-\underline{c}_1 complex
                                                        pergillus ochraceus TS), 115, 692
  comparison with mitochondrial inner
                                                    C21 side-chain cleavage system,
       membrane 30K hydrophobic protein
                                                        comparison in adrenal and testic-
       (yeast), 110, 945
                                                         ular microsomes (porcine), 111,
Cytochrome c
                                                         512
  heme-undecapeptide from
                                                    catalysis of organic hydroperoxides
    H<sub>2</sub>O<sub>2</sub>-mediated crosslinking of
                                                         and molecular oxygen (rat liver),
       crystallins (human lens), 113, 592
                                                         110, 646
    H<sub>2</sub>O<sub>2</sub>-mediated NADPH oxidation
                                                    -catalyzed conversion, 5-hydroperoxy-
       to NADP<sup>+</sup>, 113, 710
                                                         eicosatetraenoic acid to
  reduction by hydrogen peroxide,
                                                         leukotriene B4, leukotriene
       inhibition by superoxide dis-
                                                         A<sub>4</sub> intermediaté (rabbit liver),
       mutase, <u>111</u>, 231
                                                         115, 995
  -ubiquinol-cytochrome c reductase
                                                    Co and Fe tetraphenylporphyrin-
       interaction, role of carboxyl
                                                         thiolate complex model system,
       groups (bovine heart), 116, 272
                                                         superoxide generation, \alpha-
Cytochrome c551
                                                         tocopherol and y-oryzanol
  redox and optical properties (Pseudo-
                                                         reaction kinetics, 115, 1002
       monas aeruginosa), <u>113</u>, 519
                                                    degradation correlated with NADPH-
Cytochrome c_{553(550)} redox and optical properties
                                                         dependent lipid peroxidation
                                                         (bovine adrenal cortex mito-
       (Desulfovibrio desulfuricans),
                                                         chondria), 110, 559
       113, 519
                                                    -dependent monooxygenase, neonatal
Cytochrome c oxidase
                                                         phenobarbital administration effect (adult rat liver), 114, 1132
  monomeric, preparation and kinetics
  (bovine heart), <u>114</u>, 822 proteolysis by various proteases,
                                                    1,1-dichloroethylene-induced decrease
                                                         in content and in monooxygenase activities (murine lung microsomes), <u>110</u>, 675
      effects on proton-pumping and oxidase activity (thermophilic
       bacterium PS3), 113, 575
                                                    immunochemical specificity (tulip
  sequence homology of bacterial and
                                                         bulb microsomes), 115, 46
       mitochondrial forms, 116, 335
                                                    isozymes
  subunit IV
                                                      detection and purification, mono-
    amino acid sequence (bovine heart),
                                                         clonal antibody-based immuno-
       110, 8
                                                         adsorption (rat liver micro-
     synthesis and intracellular
                                                         somes), 116, 859
       transport in intact hepatoma
                                                       ethanol-induced, role in acet-
cells (rat), \underline{110}, 132 Cytochrome \underline{c} reductase
                                                         aminophen activation (rabbit
                                                         hepatic microsomes), 112, 8
  catalytic component of NADPH-
                                                     lanosterol 14a-demethylation, inhibi-
       dependent oxidoreductase in
                                                         tion by buthiobate (Saccharo-
       phorbol myristic acetate-stimu-
```

myces cerevisiae), 115, 642 Cytochromes leukotriene B4 metabolism (rat membrane-bound respiratory, effects on soluble phenobarbitál-induciliver), 114, 850 ble cytochrome P-450 spectrum 3-methylcholanthrene-induced, high spin form, isolation and charac-(Bacillus megaterium), 112, 927 terization (rat liver), 111, 504 Cytokeratin synthesis, hormonal stimulation microsome-bound, heme reversible transfer between different moleceffect (rat cultured hepatocytes), 114, 556 ular species (rat liver), 116, 1013 Cytokines molecular species, two forms in from peritoneal exudate cells, acute ergosterol biosynthesis (Sacchaphase response induction (rat), romyces cerevisiae), 116, 162 <u>112</u>, 14 multiple forms, separation by HPLC Cytosine (phenobarbital-pretreated rat), endoreduplication induction in cell 117, 268 culture (Chinese hamster V79 cells), $\underline{113}$, 142 phenobarbital-inducible Cytosine arabinoside allylisopropylacetamide effects on total chromophore and P-450 2 effect on deoxynucleoside triphosform (rat hepatic microsomes), 111, 926 phate pools (Chinese hamster V79 cells), <u>114</u>, 458 in soluble extract, spectral Cytotoxicity changes by membrane-bound respiradrenocorticotropin-related peptide, atory cytochromes (Bacillus me-115, 339 gaterium), <u>112</u>, 927 aflatoxin B₁-induced, metabolic testicular, human choriogonadobasis (guinea pig, mouse, quail, tropin-induced decrease in microrat), 114, 813 somes and mitochondria (mouse). antigen-targeting, bleomycin-111, 424 monoclonal antibody conjugate, thiol-containing peptide-hemin 115, 1009 complex model (bovine), 115, 590 7β-hydroxycholesterol, serum lipo-Cytochrome P-450_{cam} protein role (rat cultured hepatoma cells), <u>117</u>, 851 heme binding and substrate-protected cysteine residues (Pseudomonas 2-8-D-ribofuranosylthiazole-4-carbox- $\begin{array}{c} \text{putida}), \ 116, \ 30 \\ \text{Cytochrome} \ \underline{P} - 450\underline{14} - \text{DM} \end{array}$ amide and 2-s-D-ribofuranosylselenazole-4-carboxamide (murine in ergosterol biosynthesis (Saccharotumor cell culture), 115, 544 myces cerevisiae), 116, 162 sensitivity to glucocorticoids and Cytochrome P-450_{22-DS} oxidized polyamines (human lymin ergosterol biosynthesis (Saccharophoid cells), <u>115</u>, 737 myces cerevisiae), 116, 162 tumor cells, induction by liposomes Cytochrome P-450LM2 containing plant phosphatidylinositol (human, mouse), 114, 863 fluorescein isothiocyanate-modified, heme iron-N-terminus distance es-D timate (rabbit), <u>113</u>, 353 H₂O₂-supported N-demethylation of Dancylcadaverine aminopyrine, comparison with effect on calmodulin-stimulated horseradish peroxidase action, 3',5'-cyclic-nucleotide phospho-113, 332 Cytochrome P-450_{LM4} diesterase (bovine heart), 117, 562 5β -cholestane- 3α , 7α -diol 12α -Ne-Dansyl-L-lysine hydroxylase activity, regulation fluorescent staining of leukemic by microsomal and cytosolic prolymphocytes, role of cholesteroltein fractions (rabbit liver), free phospholipid domains in mem-113, 212 branes (human, mouse), 111, 768 Cytochrome P-450_{scc} peroxidative hydroxylation of effect on tubuline assembly (bovine brain), $\underline{116}$, 128 20-hydroperoxy derivatives of cholesterol, transient species Daunomycin formation (bovine adrenocortical), 112, 655 interstrand DNA crosslink formation.

mechanism (HeLa cells), 110, 819

rat cells), 114, 214

Subject Index

Daunorubicin

```
3':5'-cyclic-nucleotide phospho-
  cardiotoxicity, connection with
                                                      diesterase in T cells,
    lipid peroxidation induction in
      heart and liver (mouse), 110, 399
                                                      correlation with concanavalin A-
    stimulation of DT-diaphorase and
                                                       induced proliferation inhibition
      glutathione transferase in neo-
                                                       (rat), 113, 425
natal beating heart cells in cul-
ture (rat), 110, 364
dCTP, see Deoxycytidine triphosphate
                                                    DNA methylation (avian sarcoma
                                                      virus-transformed rat cells).
                                                      114, 214
Decaprenyl pyrophosphate synthetase
                                                Deoxynucleoside triphosphate (dNTP)
  purification and characterization
                                                  pools
      (porcine liver mitochondria),
                                                    mutagen effects (Chinese hamster
      <u>116</u>, 500
                                                      V79 cells), 114, 458
Decarboxylation
                                                    uv-induced change kinetics, effect
  pyruvate (rat perfused skeletal
                                                      on DNA synthesis measurements
      muscle), 116, 456
                                                       (Chinese hamster ovary), 116, 1064
Delayed hypersensitivity
                                                Deoxyribonuclease I
  to sheep erythrocytes, inhibition by
                                                  hydrolysis of dsDNA and ssDNA, effect
      lecanoric acid analogs (mouse),
                                                      on inhibition by adenovirus-spe-
      110, 733
                                                      cific DNA-binding protein, 110,
DDP, see Diamminedichloroplatinum
3-Deaza-(±)aristerimycin
                                                  inhibition by adenovirus-specific
  adenosylmethionine decarboxylase
                                                      DNA-binding protein (KB cells),
      inhibition, putrescine accumula-
                                                      110, 443
      tion (HeLa cells), 114, 505
                                                  nucleotide sequence cleavage,
7-Dehydrocholesterol
                                                      guanine-modified DNA, 117, 916
                                                  solubilization of Triton X-100-
  strong inhibition of sphingomyelin
                                                      resistant nuclear glucocorti-
      degradation by fibroblasts, ef-
      fect on sphingomyelinase activity
                                                      coid receptors, comparison with
      (human), 112, 860
                                                      deoxyribonuclease II (rat thymo-
                                                      cytes), <u>111</u>, 760
Dehydrogenases
                                                Deoxyribonuclease II
  with NADPH-binding region, similar
                                                  inhibition by adenovirus-specific
      antigenic determinant detection
      by malic enzyme antibodies, 112,
                                                      DNA-binding protein, 110, 443
                                                Deoxyribonucleoside diphosphates
      1007
Deinococcus radiodurans
                                                  substrate for nucleosidedi-
  uv-induced mutation, DNA crosslink
                                                      phosphatase, cluster analysis
      increase, 112, 458
                                                       (rat hepatocyte Golgi fraction),
                                                113, 178; erratum, 114, 1200
Deoxythymidine triphosphate (dTTP)
Deltakephalin
  synthetic peptide with high affinity
                                                  uv irradiation-induced increase, role
      to opiate \delta-receptors (rat brain
                                                      in replication inhibition (Chi-
      membranes), <u>111</u>, 390
                                                      nese hamster ovary cells), 114, 34
N-Demethylation
                                                Depsipeptides
  aminopyrine, H<sub>2</sub>O<sub>2</sub>-supported,
                                                  formation catalyzed by enniatin
      catalysis by cytochrome P-450 and
                                                      synthetase (Fusarium oxysporum),
      horseradish peroxidase, detection
                                                      110, 292
      by EPR, <u>113</u>, 332
                                                Dermatan sulfate
Deoxycytidine
                                                  fractionation by affinity for heparin cofactor II, <u>112</u>, 663
  requirement for drug-resistant
      mutation induction by 5-fluoro-
deoxyuridine (Chinese hamster cells), 110, 573
Deoxycytidine triphosphate (dCTP)
                                                Desulfotomaculum nigrificans
                                                  cell extracts, bisulfate reduction,
                                                      trithionate and thiosulfate in-
                                                termediates, 117, 530
Desulfovibrio desulfuricans
  uv- and dimethyl sulfate-induced
      decrease, replication inhibition
                                                  cytochrome c comparison with
      role (Chinese hamster ovary
                                                      Pseudom<del>o</del>nas aeruginosa, 113, 519
      cells), 114, 34
                                                Detergents
5'-Deoxy-5'-methylthioadenosine
                                                  electrophoresis assay in agarose gels
  inhibition of
    S-adenosylmethionine consumption,
                                                      with red blood cells, 114, 699
                                                Deuterium
       S-adenosylhomocysteine decrease
                                                  -H exchange reaction of thiamin,
      Tavian sarcoma virus-transformed
```

```
failure of insulin to stimulate
      indole ring and thiazolium ring
      stacking-interaction effect, 116,
                                                       pyruvate dehydrogenase activator
                                                      release (rat liver), 112, 35
  -induced phosphocreatine signal splitting, <sup>31</sup>P NMR, <u>114</u>, 1117
                                                    malic enzyme mRNA induction by
                                                       fructose and insulin (rat liver),
Deuteroporphyrin 6(7)methylester,7(6)-
                                                       112, 176
      (histidine methylester)
                                                Diacylglycerols
  fast atom bombardment mass spectro-
                                                  stimulation of phosphatidylcholine or
      metry, disproportionation and
                                                       phosphatidylinositol bilayer hy-
      recombination in thioglycerol
                                                       drolysis by phospholipase A or C,
      matrix, <u>111</u>, 478
                                                       cell stimulation role (human,
Dexamethasone
                                                rat), <u>117</u>, 196
Diadenosine <u>5',5'''-p1</u>, p4-tetra-
  differentiation induction in
                                                       phosphate
      histiocytic lymphoma cell line
      U937, lipomodulin synthesis in-
                                                  anaerobiosis-induced decrease in
                                                       Ehrlich ascites cells, role in
      duction role (human), 111, 551
                                                       DNA synthesis blockage, 110, 688
  effect on
                                                Diadenosine 5',5'''-Pl,P3-tri-
    cytokeratin synthesis (rat cultured
      hepatocytes), 114, 556
                                                       phosphate
    insulin generation of pyruvate
                                                  human platelets, 115, 253
      dehydrogenase inhibitor (rat
                                                2,6-Diamino-4-hydroxy-5N-methyl-form-
      liver), <u>117</u>, 456
                                                       amidopyrimidine
    lipogenic testicular enzymes (rat),
                                                   inhibition of DNA synthesis catalyzed
      115, 606
                                                       by DNA polymerase I from Esche-
  inhibition of phosphatidylinositol
                                                       richia coli, 110, 552
      synthesis and degradation in em-
                                                Diamminedichloroplatinum (DDP)
      bryonic cell line, role in cell
                                                   cis isomer, antitumor activity
      proliferation inhibition (human
                                                       adriamycin effect (Escherichia
      fibroblasts), <u>110</u>, 200
                                                       <u>coli</u>), <u>115</u>, 577
Dexamethasone-receptor complex
                                                   cis and trans isomers
  extracted from HeLa cell nuclei,
                                                     DNA-chromosomal protein cross-
                                                       linking (HeLa cells), <u>114</u>, 767
      association with RNA, 113, 876
Dextrans
                                                     DNA synthesis inhibition in
  branch formation in sucrose absence
                                                       leukemia cells, comparative ef-
      (Streptococcus mutans), 115, 287
                                                       ficacy (L1210 cells), 112, 555
  T-40, bleomycin-monoclonal antibody
                                                Diazonium benzenesulfonic acid
      conjugate production, 115, 1009
                                                   F<sub>1</sub>-ATPase subunit labeling, acti-
Diabetes
                                                       vating and inactivating ligand
  alloxan-induced, carbamoyl-phosphate
                                                       effects (bovine heart), 113, 273
      synthetase decrease restoration
                                                Dibutyryl cAMP
      by insulin injections (rat
                                                   effect on CHO cell sensitivity to
      liver), <u>114</u>, 255
                                                  mitomycin C, 111, 247 growth inhibition of human breast
  collagen from placenta, higher
                                                  cancer cells, 110, 235 induction of Ca<sup>2+</sup> influx and Ca<sup>2+</sup>-dependent electrical ac-
      platelet aggregating potency,
      role in nonenzymatic glycosyla-
      tion increase (human), 111, 602
  inherited, hydroxymethylglutaryl-CoA
                                                       tivity (murine pancreatic islet B
      reductase activity changes
                                                       cells), 112, 614
      (murine intestine, liver), 113,638
                                                (1,6-Di(0-carbamoy1)cyclohexanone-
  lens epithelium basement membrane in
                                                      oxime)hexane
      vivo glycosylation (human), 117,51
                                                  effect on diglyceride lipase activity
  streptozotocin-induced
                                                      (intact human platelets), 116, 68
    effect on
                                                Dicarboxylate carrier
      active unphosphorylated form of
                                                  mitochondrial, reconstitution by
         branched chain α-ketoacid dehy-
                                                       inner membrane Triton extract in-
         drogenase (rat heart, kidney,
                                                       corporation into liposomes (rat
         liver), <u>111</u>, 74
                                                       liver), 113, 205
      hepatic binding (rat), 115, 82
                                                Dichloroacetate
      regulatory subunit type I cAMP-
                                                  inhibition of
         dependent protein kinase cAMP
                                                     pyruvate dehydrogenase α-subunit
         binding activity (rat liver),
```

<u>117</u>, 794

phosphorylation in isolated mito-

```
heart, kidney, liver), 111, 74
      chondria (rat brain, heart,
      liver), <u>111</u>, 1054
                                              Diethylpyrocarbonate
                                                 ferredoxin modification, essential
    succinyl-CoA synthetase phosphory-
                                                     hystidyl residue detection
      lation in isolated mitochondria
                                                     (spinach), 112, 508
      (rat brain, heart, liver), 111,
                                              DiethylstilbestroT
      1054
                                                Ca transport stimulation in
1.1-Dichloroethylene
                                                plasma membrane (wheat proto-
plasts), <u>113</u>, 171
effect on oxytocin binding to
  toxic effect on lung, cellular
      injury and impairment of cyto-
      chrome P-450-dependent monooxy-
                                                     myoepithelial cell membranes from
      genases (mouse), 110, 675
                                                     mammary tissue (rat), 112, 717
Dichloromethyl carbene
                                                primary and secondary treatment,
  carbon tetrachloride metabolite (rat
                                                     differential effects on vitello-
      liver microsome), 117, 367
                                                     genins I and II (chicken liver,
                                                     plasma), 112, 1049
Dichlorophenolindophenol reductase
                                              α-Difluoromethylornithine
  NADPH-dependent oxidoreductase
                                                 inhibition of
      catalytic component in phorbol
                                                   ornithine decarboxylase, role in
      myristic acetate-stimulated neu-
                                                     embryonal carcinoma cell dif-
      trophils (human), 110, 873
                                                     ferentiation (mouse), 114, 410
Dicoumarol
                                                   polyamine biosynthesis, role in
  effect on daunorubicin cardiotoxicity
                                                     melanoma cell differentiation
      (neonatal rat beating cells in
                                                     (murine Cloudman S91), 113, 18
  culture), <u>110</u>, 364 inhibition of <del>3-bromomethylmenadione</del>
                                               Diglyceride lipase, see Lipoprotein
                                                     lipase
      reduction by DT-diaphorase, muta-
                                               Diheptanoyl-phosphatidylcholine
      genicity, 111, 346
                                                 lipoprotein lipase-catalyzed
Dictyostelium discoideum
                                                     hydrolysis, apolipoprotein C-II
  chemotactic stimulation, cytoskeleton
                                                     effect (bovine milk), 113, 811
      actin change, 115, 351
                                              Dihexanoyl-phosphatidylcholine
  α-mannosidase, and bovine liver
                                                 lipoprotein lipase-catalyzed
      phosphomannosyl receptors, inter-
                                                     hydrolysis, apolipoprotein C-II
                                                     effect (bovine milk), 113, 811
      actions, 116, 541
                                               Dihomo-y-linolenic acid
Dicyclohexylcarbodiimide
                                                 -incubated neutrophils, leukotriene
  inhibition of Golgi apparatus
                                                     production (human), 114, 855
       function (rat liver), 114, 620
                                               7,8,9,10-Dihydrodiol-epoxide
  interaction with proton-translocating
                                                 vicinal, 1-nitrobenzo(a)pyrene
      ATPase, kinetics (bovine cardiac
                                                     metabolite (rat liver micro-
      mitochondria), 111, 333
                                                     somes), 117, 541
Diet
                                               Dihydropteridine reductase (NADH)
  high carbohydrate, low fat: decrease
                                                 inhibition by aminochromes (human brain), <u>113</u>, 895
       in hydroxymethylglutaryl-CoA re-
       ductase and cholesterol synthesis
                                               Dihydrotestosterone
       (rat liver), 113, 888
                                                 binding by neonatal androgen re-
  choline-deficient, UDPglucuronosyl-
                                                     ceptors (rat), <u>111</u>, 717
      transferase stimulation (rat
                                                 metabolism in granulosa cell culture,
      hepatic microsomes), 114, 418
                                                     androgen effects (rat), 113, 948
  eicosapentaenoic acid ingestion,
                                               \alpha, \omega-Dihydroxycarotenoids
      effect on thromboxane A3 forma-
                                                 effect on mechanical properties of
      tion (human platelets), 116, 1091
                                                     phospholipid unilamellar vesi-
  ethanol, prolonged feeding, effect on
                                                     cles, <u>110</u>, 320
      Ca<sup>2+</sup> transport (rat liver mito-
                                               1,25-Dihydroxycholecalciferol, see
      chondria), 117, 169
                                                     1,25-Dihydroxyvitamin D<sub>3</sub>
  high fat, effect on insulin
                                               (\pm)-7r,8t-Dihydroxy-9t,10t-epoxy-7,-
      generation of pyruvate dehydro-
                                                     8,9,10-tetrahydrobenzo[a]pyrene
      genase inhibitor (rat liver),
                                                 interaction with relaxed circular
      117, 456
                                                     pBR322 DNA, positive supercoiling
  low protein, effect on active unphos-
                                                     induction, 114, 14
      phorylated form of branched chain
                                               2.3-Dihydroxy-2-phenylpropylamine
      α-ketoacid dehydrogenase (rat
                                                 conversion from 1-phenyl-1-
```

```
aminomethylene by dopamine
                                                Dimannosyldiglyceride
      β-hydroxylase, 110, 161
                                                   effect on liposome circulation levels
(\pm)-7r,8t-Dihydroxy-7,8,9,10-tetra-
                                                       and uptake into liver (mouse),
      hydrobenzo[a]pyrene
                                                       110, 140
  intercalation into calf thymus DNA
                                                 Dimethadione
      and synthetic polynucleotides,
                                                   uptake: phorbol esters, platelet-
      base sequence selectivity, spec-
                                                       derived growth factor,
      troscopy, <u>114</u>, 8
                                                       vasopressin, and serum effects
1,25-Dihydroxyvitamin D<sub>3</sub>
                                                        (Swiss 3T3 cells), 116, 931
  biphasic effect on growth of human
                                                 Dimethylamine
      breast cancer cells, calcitonin
                                                   oxidation by microsomal carbon
      effect, 110, 235
                                                       monoxide-sensitive monooxygenase
  determination by high affinity
                                                        (Candida biodinii cell-free ex-
                                                 tracts), 113, 900
Dimethylaniline monooxygenase
      monoclonal antibodies, 112, 431
1,25-Dihydroxyvitamin D<sub>3</sub> receptors
  regulation, effect on hormonal
                                                   and iodide peroxidase, role in
      responsiveness (LLC-PK1 kidney
                                                       1-methyl-2-thioimidazole metabo-
      cells), 116, 121
                                                       lism (porcine thyroid), 116, 449
1\alpha,25-Dihydroxyvitamin D<sub>3</sub>
                                                7,12-Dimethylbenz[a]anthracene
  -induced differentiation of promyelo-
                                                   -dependent carcinogenesis, inhibition
      cytic leukemia cells into
                                                       by 1\alpha,25-dihydroxyvitamin D<sub>3</sub>
      monocyte macrophages (human),
                                                       (murine skin), \underline{116}, 605
      117, 86
                                                1,2-Dimethylhydrazine
  inhibition of 7,12-dimethylbenz[a]-
                                                   induction of N<sup>5</sup>-methyl-N<sup>5</sup>-formyl-
      anthracene- or 12-0-tetradeca-
                                                       2,5,6-tri-amino-4-hydroxy-
      noylphorbol-13-acetate-dependent
                                                       pyrimidine as major DNA adduct
      carcinogenesis (murine skin),
                                                       (rat liver), 110, 625
      116, 605
                                                2-6-Dimethyl-9-hydroxyellipticinium
  serum concentrations (human,
                                                   inhibition of supercoiled DNA
      marmoset, rhesus monkey), 114, 452
                                                       relaxation by Trypanosoma cruzi topoisomerase T, 117, 1
1α,25-Dihydroxyvitamin D<sub>3</sub> receptors
  second peak detection by poly-
                                                N, N-Dimethylnitrosamine
      acrylamide gel electrophoresis
                                                   induction of N<sup>5</sup>-methyl-N<sup>5</sup>-formyl-
      with dithiothreitol (chicken intestine), 113, 687
                                                       2,5,6-tri-amino-4-hydroxy-
                                                       pyrimidine as major DNA adduct
24,25-Dihydroxyvitamin D<sub>3</sub>
                                                        (rat liver), 110, 625
  conversion from vitamin D3, accu-
      mulation in cauda epididymus
                                                 5,5-Dimethyloxazolidine-2-4-dione, see
                                                       Dimethadione
       (rat), 113, 982
25,26-Dihydroxyvitamin Da
                                                 Dimethyl sulfate
  conversion from 25-hydroxyvitamin
                                                   -modified DNA: bleomycin and DNase 1
      D<sub>3</sub> by renal microsomes (rat),
                                                        nucleotide sequence cleavage,
      110, 766
                                                       117, 916
4,4'-Diisothiocyanostilbene-2,2'-
                                                   replication inhibition, role in dCTP
                                                        decrease (Chinese hamster ovary
      disulfonate
  inhibition of ADP-stimulated
                                                        cells), <u>114</u>, 34
      aggregation of gel-filtered
                                                 Dimethyl sulfide
      platelets (bovine), 111, 306
                                                   alkylation of DNA and poly(dG-dC)-
                                                        poly(dG-dC) in B and Z forms,
Dileoyl phosphatidic acid
  polymorphic preferences with Ca<sup>2+</sup>
                                                   uncoupling of oxidative phosphory-
      {\rm Mg}^{2+}, {\rm ^{31}P}, and {\rm ^{2}H} NMR, {\rm \underline{111}}, 675
                                                        lation in vitro (rat hepatic
                                                       mitochondria), 110, 325
Diltiazem
                                                 Dimethyl sulfoxide
  enhancement of
                                                   effect on diphenylhexatriene fluores-
    nimodipine negative inotropic
                                                        cence polarization in in-
      action (canine, rat heart), 114,
                                                        tracytoplasmic and plasma mem-
                                                        branes (murine Friend leukemia
    plasmid DNA-mediated transformation
      of murine cells by herpes simplex
                                                       cells), 117, 294
                                                   oxidation by microsomes, EDTA and Fe
      virus thymidine kinase gene, 110,
                                                       effects (rat liver), 116, 765
      783
```

stimulation of

```
interferon ß (mouse), 110, 88
    differentiation in Friend erythro-
                                                   polarization in intracytoplasmic
      leukemia cells, inhibition by lectins, <u>110</u>, 228
                                                     and plasma membranes, differen-
                                                     tiation inducer effects (murine
    tyrosine residue phosphorylation in
                                                     Friend leukemia cells), <u>117</u>, 294
      membranes from erythroleukemia
                                                 incorporated into rat thyroid cells,
      cells (mouse), 112, 413
                                                     fluorescence polarization in-
  substrate for chloride peroxidase
                                                     crease by thyrotropin, 110, 48
      (<u>Caldariomyces fumago</u>), <u>116</u>, 82
                                              Diphosphoinositides
  synthesis of ATP by F1-ATPase, 114, 907
                                                 thrombin-induced increase in
  uncoupling of oxidative phos-
                                                     platelets, time course (human),
      phorylation (rat hepatic mito-
                                                     110, 660
      chondria), 110, 325
                                              Diphtheria toxin
2,4-Dinitrofluorobenzene
                                                 synthetic peptides coupled to tetanus
  inhibition of creatine phosphokinase
                                                     toxoid, antibody immunogenicity
      and protein and lipid synthesis
                                                     and response specificity
      in muscle (rat quarter dia-
                                                     (murine), <u>117</u>, 908
      phragm), <u>111</u>, 884
                                              Disaccharides
Dinucleosidetetreaphosphatase, see
                                                units in heparan sulfate, relative
      Bis(5'-guanosyl) tetraphosphatase
                                                     proportions in tissues (mammals),
4,5-Dioxovalerate
                                                     111, 865
  produced by 4-oxo-5-hydroxyvalerate
                                              Disuccinylamidyl suberate
      dehydrogenation, conversion to 5-
                                                crosslinking of tetrodotoxin-binding
      aminolevulinate by aminolevu-
                                                     component from electroplax, co-
      linate aminotransferase, 112, 986
                                                     valent labeling of 270,000-dalton
Dipeptidase
                                                     protein (Electrophorus electri-
  glycylglycine and L-cysteinylglycine
                                                     cus), 114, 126
      hydrolysis, proton NMR (human in-
                                               Dithiobis-(succinimidyl propionate)
      tact erythrocytes, lysates), 110,
                                                prothrombin crosslinking, Ca effect,
      305
                                                     111, 213
Dipeptide-hydroxamates
                                               Dithiothreitol
  dipeptidyl carboxypeptidase inhibi-
                                                 la,25-dihydroxyvitamin Dʒ recep-
      tion (bovine lung), 116, 394
                                                     tor molecular weight analysis by
Dipeptides
                                                     polyacrylamide gel electro-
  -2-methoxy-2,4-diphenyl-3(2H)-furanone
                                                     phoresis, <u>113</u>, 687
      chromophoric reaction, Chiro-
                                                 fructose-1,6-bisphosphatase acti-
      optical properties, 114, 433
                                                     vation, inhibition by sper-
Dipeptidyl carboxypeptidase
                                                     midine and spermine (spinach chloroplasts), 115, 707
  active in enkephalin containing
      peptide metabolism (rat brain
                                                 inhibition of gonadotropin-releasing
      synaptic membrane), <u>114</u>, 804
                                                     hormone-induced luteinizing hor-
  hydrolysis of peptides containing
                                                     mone release from pituitaries
      C-terminal nitrobenzylamine (hu-
                                                     (immature female rat), 112, 306
      man kidney), 110, 654
                                                 reversal of adenylate kinase
  inhibition by
                                                     inhibition by elemental sulfur,
    benzolactams, synthesis and
                                                     113, 348
      characterization, 117, 108
                                               DNA
    dipeptide-hydroxamates (bovine
                                                 actin gene from Drosphila melano-
      lung), 116, 394
                                                     gaster, hybridization with genes from widely divergent species,
    mercaptomethyl lactams, conforma-
      tional aspects of interactions,
                                                     sequence homology, 111, 67
      111, 166
                                                 -adriamycin interaction, Fourier
  membrane-associated, captopril
                                                     transform infrared spectra (human
      binding (rat tissues), 112, 1027
                                                     erythroleukemia K562 cells), 116,
  seminal fluid, pulmonary and testicu-
                                                     321
      lar isoenzyme comparison
                                                 Alu sequences, specific binding by
      (rabbit), 11<u>5</u>, 1096
                                                     HeLa nuclear extracts (human),
  substance P hydrolysis (rat brain),
                                                 \frac{117}{B} and Z forms
      <u>116</u>, 735
1,6-Diphenyl-1,3,5-hexatriene
                                                   alkylation by dimethylsulfate or
                                                     methylnitrosourea, methylation by
  fluorescence
                                                     DNA (cytosine-5-)-methyltrans-
    anisotropy in L cells, increase by
```

glioma and fetal brain cells (hu-

```
ferase (chicken erythrocytes),
     116, 682
  thermally driven interconversion,
     115, 100
binding to
  aflatoxin B<sub>1</sub> after co-oxy-
     genation coupled to arachidonic
     acid metabolism (murine embryo
     fibroblasts), 112, 1034
  androgen receptors, characteristics (rat prostate), 114, 1147 benz[a]anthracene derivatives,
     anthracene, and phenanthrene,
     fluorescence and photoelectron
     study, 112, 1
  benzo[a]pyrene, inhibition by
     ellagic acid (calf thymus, rat
     epidermis), <u>114</u>, 388
  cAMP-independent protein kinase,
     characterization (rat liver nu-
  clei), 117, 610

meso-tetra(4-N-methylpyridyl)porphine
and Zn<sup>2+</sup> and Ni<sup>2+</sup> derivatives,
     NMR and viscometric studies, 113,
     148
  metabolically activated carcinogen (±)-7r,8t-dihydroxy-7,8,9,10-tetra-
hydrobenzo[a]pyrene, mechanism (calf thymus), 114, 8 carcinogen-induced breaks, detection
     by nick-translation reaction with
     Escherichia coli DNA polymerase I
     (human fibroblasts), 111, 383
-chromosomal protein crosslinking by
     uv-, \gamma-radiation, and antitumor drugs (HeLa cells), \underline{114}, 767
circular relaxed of pBR322 plasmid,
     interaction with (\pm)-7r,8t-
     di-hydroxy-9t,10t-epoxy-7,8,9,10-
     tetrahydrobenzo[a]pyrene, 114, 14
complementary (cDNA)
  clones
     aldolase B, nucleotide sequence
        (human), 117, 601
     \alpha 1-antitrypsin, isolation
        (human leukocytes, liver), 116,
     interferon-induction-specific se-
       quences, resemblance to mito-
       chondrial rRNA genes (human
     placenta), <u>114</u>, 670 interleukin 2 mRNA, amino acid
        sequence (human tonsils), 115,
       1040
     opsin, isolation and nucleotide
       sequence (bovine), \underline{116}, 563
     prostate poly(A)RNA, coding for
     androgen-dependent polypeptides
(rat), \underline{111}, 624 cytoplasmic mRNA from glioma cells,
  excess RNA hybridization tech-
  nique for comparison of mRNAs in
```

```
man), 110, 96
   double-stranded, synthesis by M1
     dsRNA reverse transcription
     (Saccharomyces cerevisiae), 114,
     518
   human hepatic apolipoprotein A-I+
     mRNA, cloning in recombinant
     plasmids (Escherichia coli), 112,
damage by ischemic injury, protection
     by nicotinic acid eliminated by
     3-aminobenzamide (murine kidney),
     113, 996
dGMP-rich, synthesis by terminal
     deoxynucleotidyl transferase
     (calf thymus chromatin), 111,
     1105; erratum, 112, 794
double-stranded (dsDNA)
   hydrolysis by various deoxyribo-
     nucleases, enzyme-specific inhi-
bition by andenovirus DNA-binding
   protein, <u>110</u>, 443
unit-length product of ssDNA
     replication by DNA polymerase y
     (bovine parvovirus), <u>117</u>, 580
endodeoxyribonuclease effect (bovine
     intestinal mucosa nuclei), 116,
     952
endogenous
  retrovirus, induction by 5-bromo-
     deoxyuridine and 5-azacytidine
     (rat embryo fibroblasts), 112, 571
exogenous
   effect on site-specific recombina-
     tion (murine L cells), 116, 959
quanine-modified
   with aflatoxin B1: bleomycin
     and DNase 1 nucleotide sequence
     cleavage, 117, 916
   with dimethyl sulfate: bleomycin
  and DNase 1 nucleotide sequence cleavage, 117, 916 with mitocycin C: bleomycin and
     DNase 1 nucleotide sequence
     cleavage, <u>117</u>, 916
intercalator-induced
     restriction-endonuclease selec-
     tive inhibition (hamster), 115,
interstrand crosslinks, formation by
     adriamycin and daunomycin (HeLa
cells), 110, 819
major adduct identification as
\underline{N^5}\text{-methyl-}\underline{N^5}\text{-formyl-}2,5,6-\text{tri-}
     amino-4-hydroxypyrimidine (rat
liver), 110, 625
methylation, inhibition by 5'-deoxy-
5'-methylthioadenosine,
     S-adenosylmethionine, and \underline{S}-
     adenosylhomocysteine (avian sar-
     coma virus-transformed rat
```

```
cells), 114, 214
methyl methane sulfonate-damaged, DNA
    synthesis and thymidylate syn-
    thase inhibition by 3-aminobenz-
    amide, \beta-lapachone, and aphidicolin (human), \frac{117}{}, 30
mitochondrial (mtDN\overline{A}), target for
    nitroxide spin-labeled 9-amino-
    acridine (KB cells), 111, 1074
nuclear
  chromatin, transcription effect on
    digestion by micrococcal nuclease
    (HeLa cell nuclei), <u>116</u>, 312
  target for nitroxide spin-labeled
    9-aminoacridine (KB cells), 111,
    1074
  transcripts in preblastoderm embryo
     synthesized RNA (Drosophila mela-
    nogaster), 112, 851
plasmids pSV2gpt and pNEO3,
    polymerization after transfection
     into Chinese hamster cells, <u>110</u>,
    593
polymerase 1, inhibition by o-phen-
    anthroline (Escherichia coli),
    115, 567
prenucleosomal and nucleosomal in
    replicating chromatin, isolation
    and characterization (CHO cells),
    110, 811
prevention of bleomycin chemi-
    luminescence induced by Fe<sup>2+</sup>.
    112, 378
recombinant
  protein products, primary
structure, fast atom bombardment
high field magnetic mass spectro-
    metry, 117, 229
  synthesized growth hormone, effect
    on mRNA sequences in hepatocyte
    culture (human), 115, 882
ribonucleotide incorporation
     (permeabilized CHEF/18 cells),
     115, 1022
satellite, undermethylation in sperm
     (bovine, murine), <u>113</u>, 695
sequence selective modification with
     2-amino-6-methyldipyrido[1,2-<u>a</u>:3',-
     2'-\underline{d}]imidazole (calf thymus),
116, 1100 singTe-stranded (ssDNA)
   hydrolysis by various deoxyribo-
     nucleases, enzyme-specific inhi-
     bition by adenovirus DNA-binding
     protein, <u>110</u>, 443
   replication to unit-length dsDNA
     product by DNA polymerase y
     (bovine parvovirus), 117, 580
strand breaks, induction by purine
     and pyrimidine analogs (mouse),
     115, 834
```

```
supercoiled
    with D-loop region, DNA-binding
      protein binding (Xenopus laevis
      mtDNA), 117, 99
    relaxation by Trypanosoma cruzi
      topoisomerase I, inhibition by
      2,6-dimethyl-9-hydroxyellipticinium
        bacteriophage), 117, 1
  s-thalassemic mutation, detection in
      Algerian patients by restriction
  endonuclease analysis, \underline{113}, 269 unwinding, \underline{Mg}^{2+} and \underline{Ca}^{2+}-depen-
      dent, poly-L-glutamic acid
      participation (porcine thymus),
      116, 217
  uv irradiation
    crosslinks in mutants (Deinococcus
      radiodurans), 112, 45\overline{8}
    photoproducts from developing
       forespores (Bacillus megaterium,
       <u>B. subtilis), 113, 618</u>
  Z form, formation potential of
      purine-pyrimidine residue alter-
      nating sequences (radish, wheat
      nuclear genomes), 116, 113
DNA-binding proteins
  adenovirus-specific, inhibition of
       deoxyribonuclease, effect on de-
       oxyribonuclease I, 110, 443
  binding to supercoiled DNA with
      D-loop region (Xenopus laevis mtDNA), \underline{117}, 99
  resistance to dissociation by sodium
       dodecyl sulfate, nucleosome de-
       termination (chicken erythrocyte
      nuclei), <u>114</u>, 99
DNA (cytosine-5-)methyltransferase
  methylation of DNA and poly(dG-dC)-
       \cdotpoly(dG-dC) in B and Z forms,
       116, 682
DNA gyrase, see Topoisomerase II
DNA ligase, see Polydeoxyribonucleotide
       synthetase
DNA nucleotidylexotransferase
  co-purifying endonuclease, charac-
       terization (calf thymus), 115, 909
  detection in nuclei and cytoplasm
       (Japanese quail embryo), 116, 303
  synthesis of
    high-molecular-weight products,
       degradation by nuclease in hybri-
       doma supernatants (mouse), <u>112</u>,
    uniquely dGMP-rich DNA (calf thymus
       chromatin), 111, 1105; erratum,
       <u>112</u>, 794
DNA nucleotidyltransferase, see DNA
      polymerase
DNA polymerase
  activity and plasma membrane skeletal
       framework (rat hepatoma), 114, 571
```

```
AY9944-induced cholesterol
  cellular and viral, inhibition by
      2'-nor-2'-deoxyguanosine and acy-
                                                       synthesis reduction (human
      clovir, kinetics (rabbit kid-
                                                       peripheral blood lymphocytes),
      ney), 116, 360
                                                       110, 82
  inhibition by polyoxotungstates
                                                    interferon, role in calmodulin
       (Escherichia coli), 116, 222
                                                       decrease in cell lines (canine,
  molecular weights in higher plants (pea seedlings), \underline{110}, 632
                                                       human), <u>111</u>, 430
                                                    8-methoxypsoralen and uv irradi-
                                                       ation (L1210 cells), <u>112</u>, 965
  stimulation by helix-destabilizing
                                                    platinum-containing compounds
      protein from herpes simplex virus
                                                       (L1210 cells), 112, 555
      type 1-infected cells (hamster
      kidney), <u>116</u>, 327
                                                  macromolecular complexes with DNA
                                                       polymerase III holoenzyme activi-
DNA polymerase T
  inhibition in vitro by 2,6-diamino-
                                                       ty (Escherichia coli), 112, 80
      4-hydroxy-5N-methyl-formamidopyri-
                                                  measurements, effects of uv-induced
                                                       changes in deoxynucleoside tri-
      midine (Escherichia coli), 110,
                                                       phosphate pools (Chinese hamster
                                                       ovary), 116, 1064
  metal content and enzymatic activity
      (Escherichia coli overproducing,
                                                  in melphalan-treated melanoma cells
  wild types), 112, 723
nick-translation reaction, carci-
                                                       with slow replication, (human),
                                                       110, 530
      nogen-induced DNA break de-
                                                  repair
      tection in human fibroblasts
                                                    following neocarzinostatin treat-
                                                       ment, defective in ataxia-
      (Escherichia coli), 111, 383
                                                       telangiectasia fibroblasts (human
DNA polymerase III
                                                       skin), 110, 483
  holoenzyme preparation, isolation and
                                                    in uv-irradiated Escherichia coli,
      characterization (Escherichia co-
                                                       cell membrane fluidity change
DNA polymerases \alpha
                                                       effect, <u>110</u>, 609
                                                    X-ray-induced, phase detection
  inhibition by palmitoyl-CoA and
  myristoyl-CoA (sea urchin eggs),
                                                       (L1210 cells), 112, 1077
                                                  stimulation by
      110, 902
                                                    dCTP excess, inhibition by dTTP
  sensitive to aphidicolin, role in
                                                       excess (Chinese hamster ovary
      synthesis of adenovirus DNA in-
                                                       cells), 114, 34
      ternal region, 113, 87
                                                    DNA polymerase I from Escherichia
DNA polymerase v
                                                       coli, inhibition by 2,6-diamino-
  inhibition by palmitoyl-CoA and
   myristoyl-CoA (sea urchin eggs),
                                                       4-hydroxy-5N-methyl-formamidopyri-
                                                       midine, 110, 552
      110, 902
                                                    phytohemagglutinin, inhibition by
  parvovirus ssDNA replication to
                                                       nicotinamide or 3-aminobenzamide
      unit-length dsDNA product (bo-
                                                       (human lymphocytes), 116, 428
      vine), 11<u>7</u>, 580
                                                     thrombin, role in protein phosphory-
DNA repair endonucleases
                                                       lation (hamster fibroblasts),
  and isolated simian virus 40
                                                       <u>111</u>, 1034
      minichromosomes, uv-irradiated
                                                Dodecyloctaethyleneglycolether
      minichromosome substrates, 113,
                                                  Na<sup>T</sup>,K<sup>T</sup>-ATPase solubilization, mo-
                                                       nomeric and trimeric structure
DNase 1, see Deoxyribonuclease 1
                                                       detection (equine kidney), 113,
DNA synthesis
  adenovirus type 5 in vitro
                                                Docosahexaenoic acid
       inhibition by aphidicolin, mecha-
                                                  effect on arachidonic acid metabolism
      nism, 113, 87
                                                       and platelet function (human),
  inhibition by
                                                       117, 549
    3-aminobenzamide, s-lapachone,
                                                Dolichol
       and aphidicolin after methyl
                                                  content and synthesis rate in
      methane sulfonate DNA damage
                                                       preputial glands and testes
       (human), <u>117</u>, 30
                                                       (mouse), 110, 512
     anaerobiosis, role in decreased
                                                  injected and in vivo synthesized,
      level of diadenosine 5',5'''-
P<sup>1</sup>,P<sup>4</sup>-tetraphosphate (Ehrlich
                                                       distribution in microsomes and
                                                       lysosomes (rat hepatocytes), 115,
       ascites cells), \underline{110}, 688
```

1983 Cumulative

```
between octanol and water, 113,
Dolichyl acyl esters
  content and synthesis rate in
                                                     resistance in Chinese hamster cell
       preputial glands and testes (mouse), 110, 512
                                                         mutants induced by 5-fluorodeoxy-
Dolichyl phosphate
                                                          uridine with deoxycytidine, 110,
  content and synthesis in testes and
                                                  DT-diaphorase, see NAD(P)H dehydro-
genase (quinone)
       preputial glands (mouse), 110, 512
                                                  dTTP, <u>see</u> Deoxythymidine triphosphate
Dwarfism
  inhibition of prolactin secretion by
       pituitary adenomatous cells, 2-
                                                     pituitary deficiency in Snell dwarf
       hydroxyestradiol and 17<sub>8</sub>-estra-
                                                         mice, myocyte elemental content
       diol effects (human), 112, 42
                                                          comparison, 114, 234
Dopamine-\beta-hydroxylase, see Dopamine
                                                   Dynorphin A
       B-monooxygenase
                                                     detection with rimorphin and
Dopamine s-monooxygenase
                                                          α-neo-endorphin (human hypothala-
  photolabeling by bleomycin (bovine
                                                         mus), 113, 30
       adrenals), <u>112</u>, 273
                                                   Dynorphin B, see Rimorphin
  suicide inhibition by olefinic
                                                   Dystrophy
       substrate 1-phenyl-1-amino-
                                                     ribosomal 60-S subunit alteration
       methylene during oxygenation
                                                          (hamster skeletal muscle), 115,
       (bovine adrenals), 110, 161
Dopamine receptors
  D2
                                                                         Ε
    affinity states and target size
       (bovine striatum), 117, 65
    selective agonist affinity decrease
                                                  EDTA (ethylenediaminetetraacetate)
       induced by pertussis toxin (bo-
                                                     effect on
vine brain), 115, 325
Double quantum filtering
                                                       Ca, Zn superoxide dismutase
                                                          electrophoretic variants (bo-
  in two-dimensional correlated <sup>1</sup>H
                                                         vine), <u>117</u>, 677
                                                       microsome oxidation of hydroxyl
       NMR spectroscopy, improved reso-
                                                         radical scavenging agents and ethanol (rat liver), 116, 765
       nance, 117, 479
Doxorubicin
  cardiotoxicity induction, ^{31}\text{P} NMR
                                                     inhibition of NADPH-dependent
                                                         oxidoreductase 05 generating
       (rat perfused heart), 110, 339
  effect on
                                                          activity (human neutrophils),
                                                         110, 973
    cisplatin antitumor activity
       (Escherichia coli), <u>115</u>, 577
                                                     reversal of Zn<sup>2+</sup>-induced dinucleo-
    transplasma membrane redox activity
                                                         sidetetraphosphatase inhibition
       (simian virus-transformed liver,
                                                         <u>113</u>, 717
  hepatoma cells), \frac{116}{\text{and}}, 210 interaction with DNA and cells,
                                                    washing of inside-out thylakoid vesicles to remove Mn<sup>2+</sup> and
       Fourier transform infrared spec-
                                                         surface proteins, oxygen evolution inhibition (pea chloro-
       tra (human erythroleukemia
       cells), 116, 321
                                                         plasts), <u>110</u>, 545
  interstrand DNA crosslink formation,
                                                  Egg white
       mechanism (HeLa cells), 110, 819
                                                     ovomucoid and ovoinhibitor isolation
  OH· radical generation via semi-
                                                          and immunological cross-reactivi-
       quinone reaction with H<sub>2</sub>O<sub>2</sub>,
                                                  ty (chicken), 110, 75
Ehrlich ascites cells
       role in cardiotoxicity (rat
       cardiac mitochondria), 114, 197
                                                     anaerobiosis-induced DNA synthesis
  resistance, regulation by plasma
                                                         blockage and diadenosine 5',5'''-
pl,P<sup>4</sup>-tetraphosphate decrease
       membrane glycoprotein phosphory-
       lation (Chinese hamster lung cells), 115, 159
                                                         with unchanged levels of ATP,
                                                         ADP, and AMP, 110, 688
                                                   Eicosanoiás
Drosophila melanogaster
                                                     salivary, circadian variation
  on carcinogenic diet, free radical
                                                          (human), 115, 201
       production decrease, ESP, 112, 602
                                                   Eicosapentaenoic acid
Drugs
                                                     dietary ingestion, effect on
  nonsteroidal anti-inflammatory,
                                                          thromboxane A<sub>3</sub> formation (human
       proton exchange acceleration
```

```
Electron transfer flavoprotein dehydro-
      platelets), 116, 1091
  -derived leukotriene Bs, chemo-
                                                      genase
                                                  Fe-S flavoprotein structure, Ra-
      tactic and degranulating ac-
      tivities for human neutrophils,
                                                      man spectroscopy (porcine hepatic
      <u>1</u>1<u>7</u>, 282
                                                      mitochondria), 113, 784
Elastase
                                                Electron transport
  carbamoyl-phosphate synthetase
                                                  plasma membrane, sensitivity to
      (ammonia) inactivation, effect on substrate binding (rat liver),
                                                      adriamycin (simian virus-trans-
                                                      formed liver, hepatoma cells),
      117, 238
                                                      116, 210
  inhibition by
                                                Electrophoresis
    phosphonofluoridates (porcine
                                                  in agarose gels with red blood cells,
      pancreas), <u>112</u>, 1085
                                                      detergent assay, 114, 699
    polyethylene glycol-induced amino
                                                Ellagic acid
      group modification, anti-elastase
                                                  inhibition of benzo[a]pyrene
      serum decreased binding (porcine
                                                      epidermal metabolism and DNA
      pancreas), <u>111</u>, 659
                                                      binding (rat), 114, 388
Electrical conductance
                                                Endocytosis
  time- and voltage-dependent, two
                                                  β-adrenergic stimulation (murine
      classes in planar lipid bilayers
                                                      renal cortex), 114, 913
       doped with colicin A, 113, 765
                                                  insulin, activity in compactin-
Electrochemistry
                                                      resistant mutants (Chinese
  auxin/ATP-dependent response of auxin
                                                      hamster), <u>117</u>, 13
       receptor isolated from maize
                                               Endodeoxyribonuclease
       leaves and reconstituted in bi-
                                                  intranuclear localization and
       layer lipid membranes, 110, 300
                                                      cleavage mechanism (bovine intes-
Electrofusion
                                                      tinal mucosa), <u>116</u>, 952
  homokaryon production, viable fused
                                               Endo-8-galactosidase
       cell generation (Chinese hamster
                                                  degradation of O-glycosidically
      ovary cells), 114, 663
                                                      linked sialylated carbohydrate
Electron microscopy
                                                      chains in leukocyte common anti-
  freeze-fracture, small unilamellar
                                                      gen from B cells (human), 110, 424
      phospholipid vesicle fusion, induction by Ca2+ and low pH,
                                                Endo-B-1,4-glucanase, see Cellulase
                                                Endogenous retrovirus
      110, 15
                                                  induction by 5-bromodeoxyuridine and
Electron paramagnetic resonance (EPR),
                                                      5-azacytidine, proviral DNA hypo-
      see also Electron spin resonance
                                                      methylation role (rat embryo fi-
      (ESR)
                                                      broblasts), 112, 571
  oxidation state of binuclear Fe site
      in azidosemimethemerythrin, 112,
                                                Endonucleases
                                                  DNA nucleotidylexotransferase co-
                                                  purifying, characterization (calf thymus), \frac{115}{\text{selective}} inhibition by
  stopped flow measurements in per-
      oxide-dependent N-demethylation
      reaction catalyzed by cyto-
      chrome P-450 and horseradish
                                                      DNA intercalators (hamster), 115,
      peroxidase, 113, 332
                                                      484
  T2D laccase and half met-NO2
                                               Endo-oligopeptidase A
      derivatives, binuclear Ču site
                                                  neurotensin degradation (rabbit
      role (Rhus vernicifera), 112, 729
                                                      brain), 116, 1151
  type 2 Cu-depleted laccase,
                                                Endo-oligopeptidase B, see Proline
      reductively decoupled type 3 site detection, \underline{114}, 57
                                                      endopeptidase
                                               Endopeptidase II
Electron spin resonance (ESR), see also
                                                  chymotrypsin-like from insect larvae,
      Electron paramagnetic resonance
                                                      amino acid sequence (Vespa orien-
                                                      talis), 110, 1
  Drosophila melanogaster on normal and carcinogenic diet, 112, 602
                                               Endoreduplication
                                                  cytosine-induced diplochromosome
  nitrogen-centered free radical
                                                      production (Chinese hamster V79
      generated by indolic compounds
                                                      cells), 113, 142
      catalyzed chemically and enzyma-
                                               B-Endorphin
      tically, 114, 168
```

and adrenocorticotropin, colocalized

Enniatin synthetase

```
in nervous system (rat duodenum),
                                                 performic acid-induced separation of
      117, 568
                                                      enniatin B synthesis intermedi-
  specific binding to
                                                      ates (Fusarium oxysporum), 110,
    cerebellar and brain membranes.
                                                      292
                                               Enoyl-CoA reductase, see Acyl-CoA
      comparative kinetics (rabbit),
                                                     dehydrogenase (NADP+)
      111, 1096
                                               Enterotoxin
    SC5b-9 complement complex in
                                                 of Clostridium perfringens, binding
      endotoxin-treated human serum,
                                                     to 50,000 M<sub>r</sub> protein from
      113, 839
                                                     brush-border membranes (rabbit),
    opiate receptors, comparison with
                                                     112, 1099
      peptide E (rat brain membrane),
      114, 1084
                                                 of Escherichia coli, shorter analog
                                                     chemical synthesis and biological
Endothelial cells
                                                     activity, <u>112</u>, 320
  membrane lipids, composition (rat),
                                               Enzymes
      113, 845
                                                 amidating, specificity for peptide
  secretion of inhibitor of tissue-type
      plasminogen activator in culture
                                                     substrate with C-terminal D-
                                                     alanine (porcine pituitary), 117,
      (human, porcine), 1<u>10</u>, 392
Endotoxin, see also Lipopolysaccharide
  from Escherichia coli, specific
                                                 microsomal, <u>see</u> Microsomal enzymes
      β-endorphin binding site induc-
                                               Enzyme-substrate complexes
      tion in human serum, 113, 839
                                                 aminopeptidase, direct detection by
Enkephalinamides
                                                     stopped-flow fluorescence (Aero-
  cyclic and acyclic partial retro-
                                                     monas), 111, 946
      inverso, biological properties.
                                               Epidermal growth factor
      115, 864
                                                 effect on cytokeratin synthesis (rat
Enkephalinase A
                                                     cultured hepatocytes), 114, 556
  purification and characterization
                                                 radioreceptor assay interference
      (calf brain), <u>115</u>, 632
                                                      (human blood serum), 114, 1036
Enkephalinase B
                                                 reduced binding by Rous sarcoma
  purification and characterization
                                                     virus-transformed rat cells, 113,
      (calf brain), 1<u>15</u>, 632
                                                      678
Enkephalin convertase
                                                 stimulation of
  inhibition by guanidinopropylsuccinic
                                                   hexose transport, Ca<sup>2+</sup>-dependence
      acid, guanidinoethylmercapto-
                                                      (murine 3T3 fibroblasts), 117, 637
      succinin acid, and bromoacetyl-D-
                                                   α-lactalbumin induction by in-
      arginine (bovine pituitary), 111,
                                                      sulin, hydrocortisone, and pro-
      994
                                                      lactin (rat mammary explant),
Enkephalins
                                                     117, 524
  analogs
    containing D-Ala<sup>2</sup>, V<sup>E</sup>Phe,
                                               Epidermal growth factor receptors
                                                 high-affinity in pancreatic acinar
      Leu<sup>5</sup>, synthesis, bioactivity
                                                     cells (rat), 11<u>1</u>, 1066
      and enzyme stability, <u>115</u>, 112
                                                 proteolysis by endogenous Ca^{2+}-
    cyclic, conformation in aqueous
                                                      activated neutral protease (rat
      solution, fluorescence study,
                                                      liver), <u>113</u>, 255
      114, 268
                                               Epididymus
  -containing peptides, metabolism by
                                                 cauda region, accumulation of 24,25-
      dipeptidyl carboxypeptidase (rat
  brain synaptic membrane), 114, 804 -degrading peptidases, distribution
                                                      dihydroxyvitamin D3 converted
                                                      from vitamin D_3 (rat), \underline{113}, 982
                                               Epinephrine
      (murine brain neuronal, glial
      cells), <u>115</u>, 423
                                                 additive effect on corticotropin-
                                                     releasing factor-induced adreno-
  -mediated inhibition of fors-
      kolin-stimulated adenylate
                                                      corticotropin release by pitu-
      cyclase (rabbit corpus luteum),
                                                      itary cells <u>in vitro</u> (rat), <u>110</u>,
      116, 574
                                                 effects on glucose output and cAMP
Enniatin B
                                                      (isolated perfused rat liver),
  enzymatic synthesis, intermediate
                                                      115, 743
      isolation and identification as
                                                 inhibitory effect on insulin
      D-2-hydroxyisovaleryl-<u>N</u>-methyl-
      valine, <u>1</u>10, 292
                                                     secretion, prevention by pre-
                                                     treatment with islet-activating
```

```
protein with Ca<sup>2+</sup> (neonatal rat
                                                       inhibitory effect on membrane-
                                                       bound Na+,K+-ATPase (human),
       pancreatic islets), 112, 684
                                                       <u>111</u>, 970
9.11-Epithio-11, 12-methano-thromboxane
                                                   intact and lysates, dipeptidase
                                                       activity assay by proton NMR (hu-
  effect on cytoplasmic free Ca<sup>2+</sup>
                                                       man), 110, 305
       concentration in platelets (hu-
      man), 117, 663
                                                  membrane
                                                     Mg<sup>2+</sup>-activated 5'-nucleotidase on
Epoxide hydrolases
                                                       exterior side (rat), 112, 407
  cytosolic and microsomal activities
       in hepatocyte and hepatoma cell lines (rat), <u>116</u>, 587
                                                     Mg-ATP-induced shape changes, two
                                                       steps connected with phosphoryla-
  endogenous induction during pregnancy
                                                       tion and ATP binding (human),
       in liver and lung (C57B1, DBA/2
                                                       112, 384
                                                     phenylglyoxal-sensitive sites, ef-
      mice), <u>112</u>, 313
  in lymphocytes with benzo[a]pyrene
                                                       fect of chloride and sulfate ions
                                                       at various pH (human), 110, 616
       4,5-oxide substrate, activation
                                                     staphylococcal a-toxin insertion
      by benzoflavones (human), 110, 525
                                                       from within, detection by photo-
  purification and properties (murine
                                                       labeling (rabbit), 111, 444
      hepatic cytosol), 112, 763
1,2-Epoxy-3-(4'-azido-2'-nitrophenoxy)-
                                                   neuraminidase-treated, hemagglu-
      propanè
                                                       tination by various Escherichia
  photoaffinity reagent for pepsin and
                                                       coli strains (human), 111, 456
      other carboxyl proteases, 111, 630
                                                   from normal individuals, acetalde-
                                                       hyde-induced formation of
Epoxyeicosatrienoic acids
                                                       abnormal hemoglobin A<sub>I</sub> fraction
  stimulation of glucagon and insulin
                                                       similar to that in alcoholism,
       release (rat pancreatic islet),
                                                       113, 1004
       114, 743
                                                   senescent and in vitro aged, selec-
1,2-Epoxy-3,3,3-trichloropropane
                                                       tive phagocytosis by macro-
  stimulation of aflatoxin B<sub>1</sub> uptake
                                                       phages, receptor identification
       and binding by isolated hepato-
                                                       (rat liver), <u>115</u>, 551
       cytes (rat), <u>110</u>, 668
                                                   sheep, immune response in macro-
Ergosterol
  biosynthesis, cytochrome P-450<sub>14-DM</sub>
                                                       phage-depleted cultures: in-
                                                       terleukin 1, monokine, and N-ace-tyl-muramyl-L-alanyl-D-isogTutamine
       and P-450<sub>22-DS</sub> involvement
       (Saccharomyces cerevisiae), 116,
                                                        effects (mice), <u>114</u>, 721
       162
                                                   in sickle cell disease, hemoglobin
  sparing by cholesterol and other
                                                       fiber formation inhibition by
       sterols lacking 24s-methyl group
                                                       Stanleyville II mutation (human),
       in growth of oxygen-deprived
                                                       111, 8
       Saccharomyces cerevisiae, 112, 47
  stimulation of microsomal palmi-
                                                Erythrosine
                                                  effect on carcinogenesis-linked aryl
       toyl-CoA desaturase, especially
       after temperature decrease from
                                                       hydrocarbon hydroxylase and gua-
      34^{\circ} to 15^{\circ}C (Tetrahymena pyriformis), 113, 96
                                                       nylate cyclase stimulation (rat
                                                       liver), 111, 409
                                                Erythrotropins
Erythrocyte membranes
                                                  I and II, isolation (fetal calf
  fluidity, metabolic depletion effects
                                                       intestine), 115, 477
       (human), <u>116</u>, 547
                                                Escherichia coli
  glutathione transferase association,
                                                  aerobically grown, acidifi-
      Ca-dependence (human), 114, 488
                                                       cation-induced hydrogen sulfide
  glyceraldehyde-phosphate dehydro-
                                                       release from Fe-S proteins, 112,
      genase binding, lysine residue role (human), 116, 423
                                                  binding of neuraminyl α2-3 galacto-
  phenothiazine solubility, photo-
                                                       sides by various tested strains,
      affinity labeling (human), 116,
                                                       111, 456
      469
                                                  biotin synthesis, sulfur incorpora-
Erythrocytes
                                                       tion from cystine, methionine,
  arachidonic acid conversion to
                                                       and thiocystine, 110, 243
      prostaglandins E_2 and F_{2\alpha} (Opsanus tau), 110, 250
                                                  F1-ATPase-N-ethoxycarbonyl-2-ethoxy-
                                                       1,2-dihydroquinoline, binding and
 hemolysate, enhancement of Ca<sup>2+</sup>
```

kinetic, 114, 684

fatty acid synthesis, inhibition by

(rat), 113, 462

```
induction of
      thiolactomycin, mechanism, 115,
      1108
                                                   creatine kinase in uterine cytosol
  gene products
                                                       immature rat), <u>111</u>, 156; <u>erra-</u>
                                                      tum, 112, 1112
    <u>dnaJ</u> and <u>dnaK</u>, synthesis in
                                                   vitellogenin mRNA synthesis,
      bacteriophage λ-infected mini-
      cells and membrane affinity, 110,
                                                      inhibition by tamoxifen (chicken liver), 112, 425
                                                 inhibitory effect on expression of
    recB and recC, properties, 116, 1144
  L factor, mRNA s-subunit synthesis
                                                      pituitary mRNA encoding precur-
      stimulation, 113, 1018
                                                      sors to lutropin and follitropin
  mutants
                                                      subunits (rat), 114, 65
                                               Estradiol benzoate
    defective in proton-translocating
      ATPase \delta-subunit of F_1 and b
                                                 -induced pituitary protein synthesis
      subunit of F_0, genetic and \overline{b}io-
                                                      and lysosomal hydrolase activity
      chemical study, 111, 143
                                                     changes (male rat), 116, 230
    RNA processing, isolation, effect
                                               Estradiol receptors, see Estrogen
      on RNase P, 114, 690
                                                     receptors
  producing high level β-galactosidase
                                               Estrogen receptors
      promoters, increase of cell
                                                 activation mechanisms, molybdate
      buoyant densities, 111, 104
                                                     effects (rabbit, rat uterine
  serine chemoreceptor-methyl-accepting
                                                     tissue), 115, 685
      chemotaxis protein, ion channel element selection, 115, 648
                                                 characterization by size-exculsion
                                                     and ion-exchange HPLC (rabbit
  uncoupling of protein and RNA
                                                     uterus), <u>115</u>, 988
      synthesis, induction by amino-
                                                 conservation during prolonged
      glycoside antibiotics, 112, 801
                                                     progesterone administration (im-
  unsaturated fatty acid content in
                                                     mature rabbit uterus), 115, 1015
      membrane, effect on toxicity of
                                                 nuclear, binding of monoclonal
      active oxygen species, 113, 301
                                                     antibodies to calf uterus cyto-
                                                     plasmic (murine uterine
  uv-irradiated
    inhibition of DNA excision repair
                                                     receptor), <u>114</u>, 107
                                                 uterine cytosol, stabilization at
      and cell membrane fluidity
                                                     37°C by treatment with dextran-
      changes, <u>110</u>, 609
                                                     coated charcoal (rat), \underline{110}, 713
    SOS system induction, cellular ATP
                                               Estrogens, see also specific estrogens
      pool evolution, 117, 556
                                                 superoxide dismutase stimulation in
  wild-type and overproducing strains,
                                                     mammary tumors to level in normal
      DNA polymerase I activity, 112,
                                                     mammary tissue (rat), 113, 883
      723
                                               Estrous cycle
Escherichia coli B
                                                 sulfated glycosaminoglycan synthesis
  bacteriophage T4D gene 29-infected,
                                                     in ovarian follicular and luteal
      folylpolyglutamate synthetase
                                                     tissue (guinea pig), 111, 574
      identification, 116, 1119
                                               Ethanol
                                                 chronic consumption effect on Ca<sup>2+</sup> transport (rat
  effects on progestin production and
      cholesterol and cholesterol ester
                                                     liver mitochondria), 117, 169
      content in luteal cells (pseudo-
                                                   phosphatidylserine increase in
                                                     synaptosomes (guinea pig), 113, 262
      pregnant rabbit), 113, 1026
17β-Estradiol
  binding by neonate serum, decrease
                                                   phospholipid methylation increase
      during turpentine-induced inflam-
                                                     causing phosphatidylcholine syn-
      mation (rat), 110, 796
                                                     thesis (rat myocardium), 111, 710
  effect on
                                                 effect on cholesterol and phospho-
    dopamine inhibition of prolactin
                                                     lipid composition (bovine HeLa
                                                     cells), <u>114</u>, 985
      secretion by pituitary adenoma-
      tous cells (human), 112, 42
                                                 induction of UDPglucuronyl transferase
                                                     activity, comparison with phenobarbital and 3-methyl-
    oxytocin binding to myoepithelial
      cell membranes (rat mammary
      tissue), <u>11</u>2, 717
                                                     cholanthrene induction (rabbit
    translational activity of poly(A)-
                                                     hepatic microsomes), 111, 219
      rich RNAs from pituitary tumor
                                                 inhibition of protein synthesis,
```

```
Subject Index
```

```
potentiation by D-galactosamine
                                                      <u>selli</u> venom), <u>111</u>, 14
                                               FAD (flavin adenine mononucleotide)
       (mouse hepatocytes), 112, 361
  metabolism in alcoholism, effect on
                                                 in monoamine oxidase, ESR analysis
      hemoglobin composition (human).
                                                      (bovine liver), <u>117</u>, 517
                                               FAD-containing monooxygenase, see
      113, 1004
                                                     Dimethylaniline monooxygenase
  oxidation by microsomes, EDTA and Fe
                                               Familial amyloidotic polyneuropathy
      effects (rat liver), 116, 765
                                                 amyloid prealbumin variant, identi-
1.N6-Ethenoadenosine triphosphate
                                                      fication (amyloidotic polyneuro-
  fluorescence increase with heavy
                                                     pathy patient kidney), 116, 880
      meromyosin (rabbit), 115, 312
N-Ethoxycarbony1-2-ethoxy-1,2-dihydro-
                                               Fast atom bombardment spectrometry
                                                 angiotension II L-malic acid
      quinoline
                                                     analogues, molecular weight and
  -F<sub>1</sub>-ATPase, binding and kinetics
                                                      amino acid sequence, 115, 653
      (Escherichia coli), 114, 684
                                                 cobalt(III)-bleomycin complexes,
7-Ethoxycoumarin O-deethylase
                                                     hydroperoxide bound to cobalt,
  cytochrome P-450-mediated induction
      by 2,3,7,8-tetrachlorodibenzo-p-
dioxin (tumor-derived human epi-
                                                     110, 959
                                                 following H-D exchange in [hydroxy-
      thelial cells), 115, 611
                                                     ^{2}Halqycerol and ^{2}Ha0.
1-Ethyl-3-(3-dimethylaminopropyl)-
                                                      active H content determination,
      carbodiimide
                                                     112, 1261
  plastocyanin-cytochrome f covalently
                                                 insulin and recombinant-DNA protein
      linked adduct, preparation
                                                     products, primary structure, 117,
      (spinach, turnip), 116, 1000
                                                     229
Ethylisopropyl-amiloride
                                                 proinsulin protonated molecular
  Na<sup>+</sup>/H<sup>+</sup> exchange inhibition (var-
                                                     species (human), 110, 753
      ious cell types), 116, 86
                                                 synthetic porphyrin disproportion-
N-Ethylmaleimide
                                                      ation and recombination in
  effect on
                                                     matrix, 111, 478
    high-affinity agonist binding sites
                                               Fasting
      of muscarinic receptor subtypes
                                                 effect on active unphosphorylated
      (rat cerebellum, cerebral cortex, heart), 116, 284
                                                     form of branched chain a-ketoacid
                                                     dehydrogenase (rat heart, kidney,
    muscarinic receptors stimulated by
                                                     liver), <u>111</u>, 74
      monovalent cations and guanine
                                                 insulin effect on pyruvate dehydro-
      nucleotides (chicken heart), 111,
                                                      genase activator release from
      41; erratum, 112, 348
                                                      liver particulate fraction (rat),
  inactivation of lymphocyte regulatory
                                                     112, 35
      volume decrease (human peripheral
                                                 6-phosphofructokinase activity
      blood), 117, 154
                                                     decrease, and fructose 2,6-bis-
Euglena gracilis
                                                     phosphate disappearance (rat
  photosynthesizing, intracellular
                                                     liver), 113, 548
       inorganic carbon accumulation in
                                               Fatty acids
      protein carbamate form, 111, 544
                                                 composition of cell membranes in
Exocytosis
                                                     uv-irradiated Escherichia coli,
  -like interaction between adrenal
                                                     effect on liquid holding re-
      medullary plasma membranes and
                                                     covery, 110, 609
      chromaffin granules, protein
                                                 covalently bound to gastric mucus
      phosphorylation role (bovine),
                                                     glycoprotein, composition changes
      110, 55
                                                      in cystic fibrosis (human), 113,
                                                     286
                                                 surface glycoprotein in C-terminal
                    F
                                                     (Trypanosoma equiperdum), 114, 119
Factor VIII
                                                 ergosterol-induced changes at 34°C
                                                 and 15°C (Tetrahymena pyrifor-
mis), 113, 96
α-fetoprotein interaction (human),
  biological and immunological
      activities, relationship (plasma,
      serum), 115, 981
```

<u>115</u>, 38

incorporation into neutral lipid fraction, increase in measles

virus-infected BGM cells, 112, 29

Factor X coagulant protein (XCP)

activation of bovine coaqulation

factor X after y-carboxyglutamic acid residue removal (Vipera rus-

```
ketogenesis, Ca<sup>2+</sup> concentration
                                                           spectra of complexes, 110, 827
                                                    Ferricyanide
       effects (rat liver mitochondria),
                                                      stimulation of growth and attachment
       116, 173
                                                           of melanoma cells, pyruvate re-
  long chain, metabolism, effect of
                                                           placement in serum-free media
       2[5(4-chlorophenyl)pentyl]oxirane-2
-carboxylate with [<sup>125</sup>I]16-
                                                           (human), 112, 183
       iodohexadecanoic acid substrate
                                                    Ferritin
                                                      translatable mRNA, levels in leaves with various Fe contents (Phaseo-
       (perfused rat heart), 117, 653
  oxidation
Ca<sup>2+</sup> concentration effects (rat
                                                           lus vulgaris), 115, 463
     liver mitochondria), 116, 173 valproic acid effect (isolated
                                                    Ferrous-dioxygen-ferric chelate complex
                                                      initiating species in lipoperoxi-
dation, <u>111</u>, 777
       rat hepatocytes), 115, 730
                                                    Ferrous ion
  polyunsaturated, S-containing, as
                                                      ADP-chelated, lipoperoxidation
       lipoxygenase inhibitor (soybean),
                                                           induction, stimulation by ferric ion, \underline{111}, 777
  synthesis, inhibition by thio-
                                                      -bleomycin interaction
       lactomycin, mechanism (Esche-
       richia co<u>li</u>), <u>115</u>, 1108
                                                        chemiluminescence prevention by
  unsaturated in cell membrane, effect
                                                           DNA, 112, 378
                                                        Mossbauer spectra of complexes,
       on toxicity of active oxygen spe-
                                                           110, 827
       cies (Escherichia coli), 113, 301
                                                      effect on Fe(III) incorporation into
Fatty acid synthetase
                                                           apoferritin (human), 116, 244
  antigenic determinant at NADPH-
                                                   plasma, decrease by copper chelating drug treatment (rat), <u>113</u>, 127 Fetal calf serum
       binding region, recognition by
       antibodies to malic enzyme, 112,
       1007
                                                      stimulation of
Felodipine
                                                        Ca<sup>2+</sup> efflux from quiescent rat
  binding to calmodulin, effects of
                                                           fibroblast cell line, 114, 240
       calmodulin, Ca antagonists, 112,
                                                        thiol:protein disulfide oxido-
       787
                                                           reductase activity in cultured
Fenitrothion
                                                           fibroblasts (human skin), 111, 872
  organophosphorous pesticide,
                                                   a-Fetoprotein
       degradation by phosphatase from
                                                      -fatty acid interaction (human), 115,
       Alčaligenes NC<sub>5</sub>, 110, 412
                                                           38
Ferredoxin
                                                      production in cytosol and serum,
  modification with diethyl-
                                                          5-azacytidine effects (neonatal
       pyrocarbonate, essential nature
                                                           rat liver), 116, 939
       of histidyl residue (spinach),
                                                      turpentine-induced decrease in
       112, 508
                                                           neonate serum during acute in-
  photoreduction by photosystem II,
                                                           flammation (rat), 110, 796
       enhanced sensitivity to plasto-
                                                   Fetus
       auinone inhibitors (inside-out
                                                      Ca and phosphate fluxes across
       spinach chloroplast vesicles),
                                                           visceral yolk sac and amnion (guinea pig), \underline{110}, 438
       115, 722
Ferredoxin-NADP<sup>+</sup> reductase
                                                   Fibrinogen
  adrenodoxin complex, electron
transfer mechanism, pH effects
(adrenal mitochondria), 115, 116
                                                      α-chain phosphorylation, interferon
                                                           enhancement (human platelets),
                                                           117, 350
                                                      phosphorylation by rat liver cytosol
  molecular heterogeneity in spinach
                                                           casein kinase 1 (human), 117, 631
       leaves, role of contaminating
       protease activity, 110, 280
                                                   Fibroblast growth factor effect on tRNA<sup>lys</sup> modifications
Ferric citrate
                                                      (BALB/C 3T3 cells), <u>115</u>, 598 neurite-promoting effect (rat PC12
  reduction, nitrate reductase (NADPH)
       catalysis (squash cotyledon),
                                                           cells), <u>114</u>, 1189
       114, 1182
                                                    Fibroblasts
Ferric ion
  ADP-chelated, stimulation of peroxi-
                                                      branched-chain amino acid catabolism.
                                                           enzymatic deficiency characteri-
       dation initiated by ferrous ion,
                                                           zation by genetic complementation
       11<u>1</u>, 777
```

tests (human), 114, 175

-bleomycin interaction, Mossbauer

```
collagen degradation (human gingiva),
                                                       catalysis by lipoxygenase, 116,
      114, 1064
                                                       612
  in Huntington disease, glycoprotein
                                                Flavoprotein-linked monooxygenase
                                                   with benzo[a]pyrene substrate,
      M<sub>r</sub> 200,000 release in culture
       (human skin), <u>111</u>, 690
                                                       inhibition by ellagic acid (rat
  low-density lipoprotein binding and
                                                       epidermal microsomes), 114, 388
       internalization, inhibition by
                                                   induced by 3-methylcholanthrene in
                                                       fetal hepatic microsomes, com-
      cAMP, effects on cholesterol and
      cholesteryl ester synthesis de-
crease (human), <u>112</u>, 795
                                                       parison with offspring enzyme
                                                       (rat), <u>113</u>, 59
                                                   stimulation by food coloring amaranth
  neocarzinostatin-treated, DNA repair
      defective in ataxia-telangiec-
                                                       and carmine (rat liver), 111, 409
                                                Fluorescein isothiocyanate
      tasia (human skin), <u>110</u>, 483
  normal and mannosidosis, Tysosomal
                                                  cytochrome \underline{P}-450\underline{M}_2 modification,
      a-D-mannosidase synthesis (hu-
                                                       heme iron-N-terminus distance,
      man), <u>115</u>, 1083
                                                       energy transfer assay, 113, 353
  quiescent <del>cul</del>ture, Ca<sup>2+</sup> efflux
                                                Fluorescence
      stimulation by fetal calf serum
                                                   detection of hemoglobin dimers
       (rat), <u>114</u>, 240
                                                       (human), <u>116</u>, 712
  sphingomyelin degradation, inhibition
                                                   1,6-dipheny1-1,3,5-hexatriene
      by cholesterol and 7-dehydro-
                                                     anisotropy in L cells, increase by
      cholesterol (human), 112, 860
                                                       interferon \beta (mouse), \underline{110}, 88
  thiol:protein disulfide oxido-
                                                     polarization in thyroid cells,
      reductase activity dependence on
      fetal calf serum and insulin
                                                       increase by thyrotropin (rat),
                                                       110, 48
      (human skin), 111, 872
                                                   intrinsic
  vitamin D<sub>3</sub> production <u>in vitro</u>
                                                     B-carotene in solution and in
       (human), 115, 444
                                                       lipid/water mixtures, 113, 102
Fibroin
                                                     tryptophan in oligomycin-sensitive
  synthesis, translational pauses
                                                       ATPase, temperature effects (bo-
       (Nephila clavipes), 116, 1033
                                                       vine cardiac submitochondrial
Fibronectin
                                                       particles), <u>111</u>, 366
  binding of
                                                   synchronous, liposomal uptake of
    Ca, equilibrium analysis (human).
                                                       microcrystalline benzo[a]pyrene,
       111, 1045
                                                       112, 1069
     lactosaminoglycans and heparan
                                                  tyrosine-tryptophan distance in
       sulfate (human teratocarcinoma
                                                       enkephalin cyclic analogs in aqueous solution, \underline{114}, 268
       cell line), 111, 952
  domain structure, identification by
      domain-specific antibodies, pro-
                                                Fluorescence-activated cell sorting
                                                  purification of insulin-containing B
       teolysis and S-cyanylation (human
      pericellular matrix, plasma),
                                                       cells (rat pancreatic islet),
                                                       114, 835
      116, 534
                                                Fluorescence anisotropy
  inhibition of platelet aggregation
                                                  steady-state and time-resolved with
       (human), 116, 135
                                                       diphenylhexatriene probe,
  production by cell line from
                                                       steroid-lipid interactions in
      hepatoblastoma (human), 110, 837
                                                       phospholipid vesicles, <u>113</u>, 799
                                                Fluorescence lifetimes
  active site substrate conformation,
                                                  hydrated bovine serum albumin
       resonance Raman spectra compari-
                                                       powders, 114, 901
       son with bromelain, chymopapain,
       and papain, 117, 725
                                                Fluoride ion
Flavin
                                                  adenylate cyclase activation,
                                                       enhancement by aluminum chloride
  in purple intermediate of D-amino-
       acid oxidase (porcine kidney),
                                                       (Fasciola h<u>ep</u>atica), 112, 911
      <u>111</u>, 588
                                                2-Fluoro-ATP
Flavin-containing monooxygenase
                                                  toxic metabolite of 9-8-D-arabinosyl-
  activity measurement by guanethidine
                                                       2-fluoroadenine (murine p388
       N-oxide formation (porcine, rat
                                                       cells), 113, 35
                                                8-Fluoro-8-demethylriboflavin
      Tiver), <u>112</u>, 437
Flavonoids
                                                  interaction with riboflavin-binding protein, <sup>19</sup>F MMR (hen egg
```

inhibition of arachidonic acid

1983 Cumulative

```
white), 110, 406
                                                             toxin effect (rat adipocytes),
5-Fluorodeoxyuridine
                                                             116, 651
                                                           in pituitary tumor cells,
  drug resistant mutation induction
       with deoxycytidine (Chinese ham-
                                                             reversal by carbachol, role of
                                                             cholinergic muscarinic recep-
       ster cells), 110, 573
                                                             tors (mouse), 114, 289
6-Fluorodopamine
disposition in striata-region nerve
microsacs, <sup>19</sup>F NMR (guinea pig
brain), <u>110</u>, 740
5-Fluoro-L-histidine
                                                        adrenocorticotropin secretion by
                                                           pituitary tumor cells, reversal
                                                           by carbachol, role of cholinergic
                                                           muscarinic receptors (mouse),
  conversion to 5-fluoroimidazole
                                                           114, 289
       analog of thyrotropin-releasing hormone, \underline{113}, 581
                                                        cAMP accumulation
                                                           cAMP-dependent protein kinase
6-Fluoronorepinephrine
                                                             activation, amylase release by
  disposition in striata-region nerve microsacs, <sup>19</sup>F NMR (guinea pig
                                                             parotid cells in vitro (mouse),
                                                             111, 21
       brain), <u>110</u>, 740
                                                           inhibition by somatostatin,
5-Fluorouracil
                                                             pertussis toxin effect (murine
  growth inhibition, inosine effect
                                                             anterior pituitary tumor
       (Jensen tumor cells), 112, 235
                                                             cells), <u>1</u>15, 794
Folic acid
                                                           by pituitary tumor cells,
  adaptation and cAMP-mediated cGMP
                                                             reversal by carbachol, role of
       response (Dictyostelium), 115, 130
                                                             cholinergic muscarinic
Follicle-stimulating hormone
                                                             receptors (mouse), 114, 289
  subunit a precursor, anterior
                                                    Fortuitin
       pituitary mRNA translation prod-
                                                      linear lipopeptide from Mycobacterium
       uct, effect of estradiol treat-
                                                           fortuitum, 400 MHz 1H NMR, 113,
       ment in vivo (rat), 114, 65
                                                           121
Follicular cells
                                                    Free radicals
  testosterone metabolism, effects of
                                                      N-centered, generation by indolic
       androgens in cell culture (rat),
                                                           compounds catalyzed chemically
       113, 948
                                                      and enzymatically, 114, 168
production by Drosophila melanogaster
on normal and carcinogenic diet,
Follitropin, see Follicle-stimulating
       hormone
Folylpolyglutamate synthetase
                                                           112, 602
   identification in bacteriophage T4D
                                                    Friend erythroleukemia cells
       gene 29-infected Escherichia coli
                                                      dimethyl sulfoxide-induced differ-
       B, <u>116</u>, 1119
                                                           entiation, inhibition by lectins,
Forespores
                                                           110, 228
   isolated and nonisolated developing,
                                                      intracytoplasmic and plasma membranes,
       uv-induced DNA photoproducts (Ba-
                                                           diphenylhexatriene fluorescence
       cillus megaterium, Bacillus sub-
                                                           polarization, differentiation
tilis), 113, 618
Formate dehydrogenase (NADP+)
                                                           inducer effects (murine), 117, 294
                                                    Fructose
  reduced Mo and W, characterization
                                                      stimulation of malic enzyme mRNA
       and spectroscopy (Clostridium thermoaceticum), 115, 61
                                                           activity in diabetic liver (rat),
                                                           112, 176
Formyl-methionyl-leucyl-phenylalanine
   superoxide radical induction in
                                                    Fructose-1,6-bisphosphatase
                                                      activation by fructose-1,6-
bisphosphate, Ca<sup>2+</sup>, dithio-
threitol, and thioredoxin-f.
       neutrophils, inhibition by prostaglandins \rm E_1 and \rm I_2 (human),
       113, 506
                                                           inhibition by spermidine and
Forskolin
  stimulation of
                                                           spermine (spinach chloroplasts),
                                                           115, 707
     adenylate cyclase
       cytoplasmic Ca<sup>2+</sup> decrease in
                                                      forms, characterization (rat liver),
                                                           <u>117</u>, 751
          thrombin-activated platelets
                                                      fructose-bisphosphatase activation
          (human), <u>113</u>, 598
                                                           inhibition by spermidine and
       enkephalin-mediated inhibition
                                                           spermine (spinach chloroplasts),
       (rabbit corpus luteum), 116, 574 inhibition by GTP or guany 1-5'-yl
                                                           115, 707
                                                      phosphorylation stimulation by cAMP
          imido-diphosphate, pertussis
```

1983 Cumulative

Subject Index

protein kinase and fructose-2,6-bisphosphatase in vitro (yeast), 115, 317

restoration of pyruvate kinase activity inhibited by limited proteolysis with cathepsin B (rat liver), 110, 682

Fructose 2,6-bisphosphate

activation of 6-phosphofructokinase, comparison with AMP effect, 111, 294

contaminant in commercial fructose 6-phosphate, effect on pyrophosphate-fructose-6-phosphate 1-phosphotransferase, <u>117</u>, 37

detection in fetal liver, increase during postnatal development (rat), 113, 672

6-phosphofructokinase stabilization, disappearance during fasting and diabetes (rat liver), 113, 548

phosphorylation stimulation of fructose-1,6-bisphosphatase in vitro (yeast), 115, 317

Fructose-bisphosphate aldolase dihydroxyacetone phosphate binding sites, activity only two out of four sites at low temperature (rabbit muscle), 110, 578

liver type (B), cDNA clone, nucleotide sequence (human), 117, 601

Fructose 6-phosphate

commercial, fructose 2,6-bisphosphate contaminant, effect on pyrophosphate-fructose-6-phosphate 1-phosphotransferase, 117, 37

α-L-Fucosidase

binding to protein isolated by phosphomannan-Sepharose chromatography (Macaca radiata brain), 112 398

112, 398 Fucosyl-globoside

glycolipid from teratocarcinoma cells (human), $\underline{112}$, 935

Fumarase, see Fumarate hydratase

conversion to malate by fumarate hydratase, absolute stereo-chemistry monitored by neutron diffraction, <u>115</u>, 1048

Fumarate hydratase

-catalyzed fumarate to malate conversion, absolute stereo-chemistry monitored by neutron diffraction, 115, 1048

Furazolidone

induction of prophage and filament formation in <u>Vibrio cholera</u>, <u>112</u>,

G

Galactolipids

structural organization, conformational analysis, 115, 666

Galactosialidosis

4-methylumbelliferyl-α-D-N-acetylneuraminic acid neuramindases, genetically different forms (human leukocytes), 117, 470

D-Galactosamine

protein synthesis inhibition, potentiation by ethanol (murine hepatocytes), 112, 361

B-Galactosidases

high level in <u>Escherichia coli</u> with recombinant plasmids, cell buoyant density increase, <u>111</u>, 104

inhibition by cytokine injection (rat liver), 112, 14

 α -Galactosyl

residue, antigenic determinant in teratocarcinoma carbohydrates (human ovarian germ cell tumor), 115, 268

Galactosylceramide

abnormal accumulation in kidney with galactosylceramidase deficiency (twitcher mouse), 110, 940

Galactosylceramidase

deficiency, abnormal accumulation of galactosylceramide in kidney (twitcher mouse), 110, 940

α-D-Galactosyltransferase

activity in calf thymus, ${}^{1}\text{H}$ NMR, 110 , 124

Gamma rays

DNA-chromosomal protein crosslinking (HeLa cells), 114, 767

Gangliosides

cancer-associated, detection by monoclonal antibody to sialosyl α2≯6galactosyl residue (human), 113, 791

ganglio-N-tetraose series, occurrence, characterization (bovine nasal cartilage), 115, 295

higher order membrane, thyrotropin and cholera toxin receptor function reconstitution (1-8 rat thyroid tumor line), 110, 772

monoclonal antibody A2B5 binding (bovine brain, human erythrocytes), 116, 836

neurite outgrowth stimulation, tubulin mRNA accumulation induction (neurohybrid clone SB21B1 cells), 116, 974

Gastric inhibitory polypeptide
inhibition of plasma growth hormone
increase induced by human pancreatic growth hormone-releasing

factor during anesthesia (rat), 112, 469

Gastrin-releasing peptide

-related substance, identification in mammalian brain (guinea pig, rat), 112, 528

GDP (guanosine 5'-diphosphate)

specific noncovalent binding to vesicular stomatitis virus NS protein, inhibition by ATP, 114, 138

Genes

- actin from <u>Drosophila melanogaster</u>, sequence homology with divergent species, hybridization study, 111, 67
- α-amylase, cloned in pUB110, promoter and NH2-terminal signal peptide region nucleotide sequence (Bacillus subtilis), 112, 678
- apolipoprotein A-I isoforms in plasma, liver, and intestine, mRNA translation in vitro (mouse), 114, 275
- Escherichia coli dnaJ and dnaK

 products, synthesis in bacteriophage λ-infected minicells and
 membrane affinity, 110, 176
 β-globin

 $\tilde{5}'$ end transcripts, long mRNA molecule detection (human bone marrow), $\underline{112}$, 1041

5' portion and flanking sequences in supercoiled plasmid, nuclease S1 sensitivity and protection by high-mobility-group proteins HMG1 and HMG2 (human), 112, 547

herpes simplex virus thymidine kinase, cloned in <u>Escherichia</u> <u>coli</u> plasmid, verapamil- and diltiazem-enhanced cell transformation (mouse), 110, 783

hygromycin B phosphotransferase, molecular cloning and expression in <u>Streptomyces lividans</u> (<u>Strep-</u> tomyces hygroscopicus), 117, 6

interferon α subtypes cloned in

Escherichia coli, relative antiviral and antiproliferative activities (human), 112, 537

interleukin 2, isolation and amino acid sequence (human), 117, 114

norpA, mutations connected with reduced phosphorylation of photo-receptor phospholipids in retinular cell membrane (Drosophila melanogaster), 111, 567 oncogenes c-Ha-ras and c-Ki-ras,

oncogenes c-Ha-ras and c-Ki-ras, hypomethylation in primary carcinomas (human), 111, 47 orotidine-5'-phosphate decarboxylase, transfer from <u>Neurospora crassa</u> to <u>Aspergillus nidulans</u>, transformation induction, <u>112</u>, 284

proton-translocating ATPase, location of mutations defective in δ subunit of F_1 and b subunit of F_0 (Escherichia coli), 111, 143

rec B products, properties (Escherichia coli), 116, 1144

recC products, properties (Escherichia coli), 116, 1144
5-S rDNA cloned in plasmids, lack of

5-S rDNA cloned in plasmids, lack of site-specific recombination in murine L cells (Xenopus borealis), 116, 959

serum albumin, structural integrity in congenital analbuminemia (human), 116, 817

Glial cells

colcemid-resistant sublines, brainspecific S100 protein synthesis (rat), 112, 73

Glioma cells

cytoplasmic mRNAs and nuclear precursors, higher specialization in comparison with fetal brain cells (human), 110, 96

platelet-derived growth factor-like growth factor, synthesis, homology with simian sarcoma virus transforming protein (human), 117, 176

Glucagon

effect on alanine 2-oxoglutarate aminotransferase (murine liver), 115, 506

inhibition of plasma growth hormone increase induced by human pancreatic growth hormone-releasing factor during anesthesia (rat), 112, 469

insulin secretion stimulation, effect on glucose-stimulated phosphatidylinositol turnover (rat pancreatic islets), 112, 419

release, stimulated by epoxyeicosatrienoic acids (rat pancreatic islet), 114, 743

from salivary gland, fictitious substance due to tracer-degrading activity resistant to protease inhibitors, radioimmunoassay (rat), 113, 340

1-,4-α-Glucan branching enzyme
 activity and sensitivity to anti enzyme IgG antibodies, com parison in skin fibroblasts from
 normal subjects and Type IV gly cogen storage disease patients,
 111, 636

1983 Cumulative

```
\alpha-Glucan phosphorylases
                                                        anoic acid substrate (perfused
                                                        rat heart), <u>117</u>, 653
  orthophosphate-dependent direct
                                                   output, secretin and epinephrine
       transfer of glucosyl residue from
       α-D-glucosyl fluoride to oligo-
                                                       effects (isolated perfused rat
                                                        liver), 115, 743
       saccharide (Escherichia coli,
       potato, rabbit skeletal muscle),
                                                   stimulation of
       <u>111</u>, 530
                                                     inositol phosphate production (rat
\beta-1,3-GTucans
                                                       pancreatic islets), 116, 9
                                                     phosphatidylinositol turnover by
  pre-phenoloxidase activation (silk-
      worm hemolymph plasma), 113, 562
                                                       mechanism independent from in-
                                                       sulin secretion (rat pancreatic islets), 112, 419
Glucocorticoid receptors
  cytosolic, protection by chloroquine
       from thermal and salt-induced in-
                                                   transport, cAMP induction of post-
       activation (rat liver), 112, 488
                                                       receptor insulin resistance (rat
  nuclear, Triton X-100-resistant,
                                                        adipocytes), <u>115</u>, 398
       preferential solubilization by
                                                   uptake by adipose tissues, stimula-
       deoxyribonuclease I and deoxy-
                                                       tion by growth hormone and
       ribonuclease II (rat thymocytes),
                                                       synthetic fragment 31-44 (rat),
       111, 760
                                                       110, 866
Glucocorticoids, see also specific
                                                 Glucose-6-phosphate
       glucocorticoids
                                                   decrease in adenocarcinoma cells
                                                       during glucose starvation (human), \underline{110}, 371
  -induced
     antiphospholipase protein, charac-
                                                 Glucose transporter
       terization (rat), 117, 878
     cytostatic and cytolethal res-
                                                   solubilization by Triton X-100 for
                                                        reconstitution experiments, Na<sup>+</sup>
       ponses, role in oxidized poly-
       amine sensitivities (human lym-
                                                        effect (porcine renal brush bor-
                                                        der), <u>112</u>, 444
       phoid cells), <u>115</u>, 737
                                                 α-Glucosidase
  phenylalanine 4-monooxygenase
                                                   synthesis by membrane bound ribosomes
       regulation in vivo (rat liver),
                                                        (Bacillus licheniformis), 114, 677
       115, 965
                                                 Glucosylβ(1>4)N-acetylglucosamine
Glucok inase
                                                   linkage unit between poly(galactosyl-
  and hexokinase, activity in paren-
                                                        glycerol phosphate) and peptido-
       chymal and nonparenchymal cells
                                                        glycan (Bacillus coagulans cell
       after methapyrilene intoxication
                                                        wall), 111, 312
       (rat liver), 115,
                             1090
                                                α-D-Glucosyl fluoride
Glucose
                                                   glucosyl residue, transfer to oligo-
  adenocarcinoma deprivation, effect on
                                                        saccharides catalyzed by \alpha-
       glycogen metabolizing enzyme ac-
                                                        glucan phosphorylases, 111, 520
  tivities (human), 110, 371 binding to subtilisin-inactivated
                                                 D-Glucuronic acid
                                                   binding by soybean agglutinin, 111,
      phosphorylase a, interaction with AMP binding, \underline{113}, 825
                                                       789
                                                 ß-D-Glucuronidase
  blood, in fetus and during postnatal
                                                   binding to brain protein isolated by
       development (rat), 113, 672
                                                       phosphomannan-Sepharose chroma-
  effect on
                                                        chromatography (Macaca radiata),
    glycosylation of glycoprotein
                                                        112, 398
      hormone α-subunit secreted by
                                                   testosterone-induced increase in
       glucose-starved Chang human he-
                                                       kidney, unaffected by polyamine
      patic cells, 112, 115
                                                        synthesis inhibition (mouse),
    insulin secretion, comparison with ionophore A23187 and 12-0-tetra-
                                                       112, 770
                                                   urinary secretion, blockage by
       decanoy1phorbol-13-acetate (rat
                                                       polyamine synthesis inhibition (mouse), 112, 770
      islet), 117, 448
  insulinotropic concentration, 6-keto-
                                                 Glutamate
      prostaglandin F_{1\alpha} release
                                                   ^{15}N-labeled, [^{15}N]leucine as
      stimulation (rat pancreatic islet), 114, 1023
                                                        source in cerebellar explants
                                                        (mouse), 115, 174
 metabolism, effect of 2[5(4-chloro-
phenyl)pentyl]oxirane-2-carboxylate
with [125I]16-iodohexadec-
                                                 Glutamate dehydrogenase
                                                   precursor synthesized in cell-free
                                                       system, transport into isolated
```

```
mitochondria (rat liver), 110, 499
                                                       increase in neonatal beating
Glutamine synthetase
                                                       heart cells in culture (rat),
  deficiency in Anabaena cycadeae
                                                       110, 364
       mutant, effect on heterocyst and
                                                  endogenous induction during pregnancy
       nitrogenase inhibition by
                                                       in liver and lung (C57B1, DBA/2
       NH_{4}^{T}, 111, 180
                                                       mice), 112, 313
  equilibrium exchange kinetics and
                                                  erythrocyte membrane association, Ca
       reaction mechanisms (ovine
                                                       dependence (human), 114, 488
       brain), <u>115</u>, 220
                                                  inhibition by indomethacin, kinetics
  isoforms (light-grown soybeans), 114,
                                                       (rat liver), 112, 980
       604
                                                  isozymes
  regulation by divalent cations
                                                     anionic, isolation and characteriza-
       (Anabaena cylindrica), <u>114</u>, 206
                                                       tion (rat hepatic cytosol), 111,
Y-Glutamyltransferase
  binding of glutathione and L-(\alpha S,5S)-
                                                    discrimination by inhibitors (rat liver), 114, 829
       α-amino-3-chloro-4,5-dihydro-5-
       isoxazoleacetic acid via arginyl
                                                Glutathione S-transferase, see
       residue (rat kidney), 112, 564
                                                      Glutathione transferase
  conversion of precursor to subunit
                                                Glycans
       form in brush border membrane
                                                  nonviable streptococcal cells,
       (rat kidney), 114, 889
                                                       immunization causing polyclonal
y-Glutamyltranspeptidase, see
                                                       isomeric anti-lactose antibody
       γ-Glutamyltransferase
                                                      production (rabbit), 113, 555.
Glutathione
                                                Glyceraldehyde-3-phosphate dehydroge-
  binding to y-glutamyltransferase
                                                      nase, see Glyceraldehyde-phos-
       via arginyl residue, phenyl-
                                                      phate dehydrogenase
       glyoxal assay (rat kidney), 112,
                                                Glyceraldehyde-phosphate dehydrogenase
       564
                                                  binding to erythrocyte membranes,
  conjugate formation with
                                                      lysine residue role (human), \underline{116}, 423
    acetaminophen, cytochrome P-450-
      dependent (ethanol-treated rabbits), \underline{112}, 8
                                                Glycerol
                                                  in C-terminal end of surface glyco-
    reduced misonidazole, identifica-
                                                      protein (Trypanosoma equiperdum),
       tion, <u>112</u>, 1013
                                                      114, 119
  content, culture condition effects
                                                Glycerol-3-phosphate dehydrogenase
       (human A549 cells), <u>114</u>, 737
                                                  modification by blue agarose (human
  inhibition of aflatoxin B1 uptake
                                                      heart), 116, 689
       and binding by isolated hepato-
                                                Glycinamide ribonucleotide transformy-
  cytes (rat), 110, 668
Na<sup>2+</sup>-dependent transport in renal
                                                      lase, see Phosphoribosylglycin-
                                                      amide formyltransferase
      basal-lateral membrane vesicles
                                                Glycine receptors
       (rat), <u>112</u>, 55
                                                  in crude synaptic membranes from
Glutathione disulfide
                                                      spinal cord, increase by Triton
  -induced protein synthesis inhibi-
                                                      X-100 treatment (rat), <u>112</u>, 809
       tion, role in high 02 partial
                                                Glycoconjugates
      pressure-activated inhibitor and
                                                  fluorescence labeling with Lucifer
      (\sim) 23,000-M<sub>r</sub> sulfhydryl
                                                      yellow CH on oxidized thymocyte
      protein (rabbit reticulocytes), 117, 135
                                                  surface (mouse), <u>112</u>, 872
keratan sulfate-like in cerebral
Glutathione-insulin transhydrogenase,
                                                      cortex, localization in micro-
       see Protein-disulphide reductase
                                                      somes (rat), 111, 28
      (gTutathione)
                                                Glycogen
Glutathione peroxidase
                                                  fast mobilization in glucose-deprived
  and lipoxygenase pathway coupling,
                                                      adenocarcinoma cells (human),
      12-hydroperoxytetraenoic acid
                                                      110, 371
      formation (selenium-deficient rat
                                                  inhibition of phosphorylase phospha-
      platelets), <u>117</u>, 183
                                                      tase purified catalytic unit, 114, 148
Glutathione transferase
  A form, increase in preneoplastic
                                                  synthesis
      hepatic lesions induced by chem-
       ical carcinogens (rat), <u>112</u>, 20
                                                    changes during postnatal develop-
```

daunorubicin-induced activity

ment (rat fetal liver), 113, 672

1983 Cumulative

regulation by pyrophosphate	gastric mucus
(Escherichia coli), <u>115</u> , 820	covalently bound fatty acids,
Glycogen branching enzyme, see 1-a-	composition changes in cystic
Glucan branching enzyme	fibrosis (human), <u>113</u> , 286
Glycogen phosphorylase	role in hydrogen ion diffusion
activation in glucose-deprived	(canine), <u>115</u> , 1053
adenocarcinoma cells (human), 110, 371	hydroxyproline-rich secreted from cytoplasm, insolubilization in
Glycogen synthase	cell wall, mechanism (carrot root
in adenocarcinoma cells during	slices), 112, 161
glucose starvation (human), 110,	M _r 200,000 release in culture media
371	by skin fibroblasts from Hunting-
indicating enzyme in glycogen	ton disease patients, 111, 690
branching enzyme coupled assay	nature of 3-[(3-cholamidopropyl)-
(human skin fibroblasts), <u>111</u> , 636	dimethylammonio]-1-propane
insulin-like stimulation by vanadate	sulfonate-solubilized muscarinic acetylcholine receptors (bovine
(rat adipocytes), 113, 80 phosphorylation by calmodulin-	cerebral cortex), 115, 814
dependent protein kinase, sub-	nerve tissue, -derived large
strate specificity (rabbit	polysialosyl glycopeptides, dis-
liver), 116, 412	tribution and characterization
rabbit antibodies, mRNA translation	(rat brain), 116, 889
product identification (rat	plasma membrane
liver), <u>117</u> , 332	-bound, possible role in dimethyl
Glycogenolysis	sulfoxide-induced differentiation
anoxia and cyanide effects (rat	of Friend erythroleukemia cells,
hepatocytes), <u>115</u> , 1033 Glycolipids	110, 228 phosphorylation, adriamycin
antigen, isolation by monoclonal	resistance regulation (Chinese
antibody binding, characteriza-	hamster lung cells), 115, 159
tion by mass spectrometry and NMR	radioiodination, inhibitory effect on
(human pancreatic carcinoma),	binding to immobilized lectins,
110, 383	110, 103
-lectin interaction, detection	surface from Trypanosoma equiperdum,
(Bandeiraea simplicifolia, Helix	glycerol and fatty acids in C-
pompatia, soybean), 115, 360 from teratocarcinoma celTs, isolation	terminal end, 114, 119
of fucosyl-globoside and sialosyl-	Tamm-Horsfall urinary, <u>see</u> Tamm-Hors- fall urinary glycoprotein
globoside (human), 112, 935	in thyrotropin receptor, interaction
Glycopeptides	with thyrotropin, fluorescence
polysialosyl, from nerve tissue	study (rat thyroid cells), 110, 48
glycoproteins, distribution and	Glycosaminoglycans
characterization (rat brain),	solid and ascites, characterization
116, 889	(P1798 murine lymphosarcoma),
Glycopeptidases	114, 976
hydrolyzing β-aspartylglucosylamine linkages, isolation and charac-	sulfated, synthesis in ovarian
terization (jack bean meal), 112,	follicular and luteal tissues during estrous cycle (guinea
155	pig), 111, 574
Glycoprotein hormones	synthesis in thyroid cell culture,
α-subunit secretion by glucose-	thyrotropin effect (porcine),
starved Chang human hepatic	<u>111</u> , 353
cells, butyrate effect on glyco-	Glycosylation
sylation, <u>112</u> , 115 Glycoproteins	lens epithelium basement membrane
α ₁ -acid, increase in serum after	(normal, diabetic human), 117, 51 Glycosyltransferases
cytokine preparation injection	activity increase following HL60 cell
(rat), <u>112</u> , 14	differentiation induction by re-
deficiency, role in low infectivity	tinoic acid and phorbol ester
of vesicular stomatitis virus re-	(human), 110, 348; erratum, 111,775
leased from interferon-treated	at neuronal cell surface in culture,
cells (human, murine), <u>117</u> , 161	activities and kinetics (chicken

```
embryo), 113, 446
                                                      growth hormone-releasing factor,
                                                      decrease by secretin, gastric in-
Glycylalycine
                                                      hibitory polypeptide, and gluca-
  hydrolysis by erythrocytes, proton
                                                      gon (rat), 112, 469
      NMR (human), 110, 305
                                                  and synthetic fragment 31-44, stimu-
Golgi apparatus
                                                      lation of glucose uptake by
  bioenergetics, ATPase role (rat liver), 114, 620
                                                      adipose tissues (rat), 110, 866
                                                Growth-hormone releasing factors, see
Gonadotropin receptors
                                                      also Somatocrinin
  in isolated ovarian nuclei, distinc-
                                                  44-amino-acid peptide, isolation and characterization (bovine hypo-
       tion from plasma membrane
       receptors (rat), 111, 127
                                                      thalamus), 117, 772
Gonadotropin-releasing hormones
                                                  and fragments, biological potency in
  binding to pituitary membrane
                                                      vivo (human, rat), 115, 525
      preparations, inhibition by
                                                  human hypothalamic, comparison of
      Ca<sup>2+</sup> (rat), 112, 306
                                                      tumor-derived forms, 114, 930
  degradation, lack (rat intact
                                                  isolation and amino acid sequence
       pituitary tissue), 114, 1028
                                                      (porcine hypothalamus), 116, 726
  mRNA polyadenylation inhibition (rat
                                                  synthetic, identical to human pancre-
      prostate), <u>115</u>, 451
                                                       atic, plasma growth hormone
Gonadotropin-releasing hormone receptors
                                                       increase in pentobarbital- and
  photoaffinity labeling with hormone
                                                      urethane-anesthetized rats: se-
       antagonist (rat pituitary mem-
                                                      cretin, gastric inhibitory poly-
      brane), 110, 116
Gossypol
                                                       112, 469
  lactate dehydrogenase inhibition,
      kinetics (bovine), 115, 180
Gramicidin A
  C-terminal dipeptide, protected
       analog molecular structure, X-ray
                                                      pocytes), 116, 651
       diffraction analysis, 112, 1056
  incorporated into phospholipid
       suspensions as channel structure,
       ir spectra_showing single-
       stranded-86-helical conforma-
       tion, 114, 373
                                                      ia), 114, 779
Granulocytes -
  peritoneal, retinoic acid effect on
       phospholipid acylation (guinea
       pig), 114, 261
Granulosa cells, see Follicular cells
Growth factors, see also specific
       growth factor
  competence and progression, effects on tRNA<sup>1ys</sup> modification reac-
       tions (BALB/C 3T3 cells), <u>115</u>, 598
  platelet-derived growth factor-like,
                                                Guanethidine N-oxide
       synthesis, homology with simian sarcoma virus transforming pro-
       tein (human glioma, sarcoma
       cells), 117, 176
                                                      112, 437
Growth hormone
  human
                                                      kinetics, 111, 994
     infusion, prolactin receptor
                                                Guanidinopropylsuccinic acid
       down-regulation (female virgin
       rat liver, mammary gland, kid-
       ney), <u>11</u>6, 644
                                                      kinetics, <u>111</u>, 994
                                                Guanine nucleotides
     and ovine, recombinant DNA syn-
                                                  activation of
       thesized, effect on mRNA se-
       quences (hepatocyte culture),
       <u>115</u>, 882
  plasma, increased by human pancreatic
```

muscarinic receptors, mimicking by N-ethylmaleimide pretreatment (chicken heart), 111, 41; erratum, 112, 348 effect on high-affinity agonist binding sites of muscarinic receptor subtypes (rat cerebellum, cerebral cortex, heart), 116, 284 -modified DNA, bleomycin and DNase 1 nucleotide sequence cleavage, 117, 916 regulation of quinuclidinyl benzilate binding to muscarinic acetylcholine receptors, effects of Tris and choline (canine, frog, mouse, rat heart), 113, 280 Guanosine polyphosphates lack of induction by aminoglycoside antibiotics (Escherichia coli). 112, 801 Guanylate cyclase Mg-dependent, activation by protoporphyrin IX (rat liver plasma membranes), 116, 47 stimulation in vitro by food coloring amaranth and carmine (rat liver), <u>111</u>, 409 low insulin concentration (rat liver), <u>114</u>, 282 Guanyl-5'-yl imido-diphosphate basal and forskolin-stimulated adenylate cyclase inhibition, pertussis toxin effect (rat adipocytes), 116, 651

Н

Halobacterium halobium

bacteriorhodopsin-deficient mutant, resolution of halorhodopsin chromophoric polypeptide in membranes, <u>112</u>, 332

purple membrane mobility character— istics, ¹³C, ³¹P, and ²H NMR, 114, 713

Halohydrin

chloroperoxidase-mediated isomer formation, neighboring group migration in allyl bromide chlorination, <u>110</u>, 880

Haloperidol

methionine-enkephalin synthesis stimulation by increasing precursor mRNA content (rat striatum), 113, 391

Halorhodopsin

retinal-binding chromophoric polypeptide, detection in bacteriorhodopsin-deficient membranes (Halobacterium halobium), 112, 332

```
Haptoglobin
```

biosynthesis, intracellular processing, and secretion (rat hepatocytes), 114, 729 turpentine-induced increase in neo-

nate serum during acute inflammation (rat), 110, 796

Heart

cAMP oscillation during cardiac cycle with highest level during systole, stimulator-triggered rapid freeze-clamp assay (rat), 111, 450

HeLa cells

dexamethasone-receptor complex and RNA, isolation from nuclei and properties, 113, 876

directly injected with human interferon ß, effect on antiviral response induction, 110, 155

Helminthosporium carbonum

HC-toxin from culture filtrate, structure and conformation, 111, 398; 113, 10

Hemagglutination

by Escherichia coli strains, effect of erythrocyte treatment with neuraminidase (human), 111, 456

Hematin

in glutathione transferase isozyme discrimination (rat liver), 114,

Hematoporphyrin

photosensitization effects on Ca²⁺ uptake (rat liver mitochondria), 115, 76

Heme

binding in cytochrome $P-450_{cam}$ (Pseudomonas putida), 116, 30 reversible transfer between different microsome-bound cytochrome P-450 molecular species (rat liver), 116, 1013

translation inhibition of &-aminolaevulinate synthesis (cell-free system), 115, 225

Hemin

5-aminolaevulinate synthase synthesis inhibition by blocking precursor processing (chicken embryo fibroblasts), 110, 42 in vitro translocation inhibition

(chicken liver mitochondria), 115, 700

effect on protein synthesis (rat hepatocytes), 114, 612

inhibition of pre-5-aminolaevulinate synthase transfer into mitochondria (chick embryo liver), 117,

-peptide complexes, thiol-containing, cytochrome P-450 models (bovine), 115, 590

1983 Cumulative Subject Index

Hemocyanins Hepatitis -carbon monoxide binding, positive cooperativity (Scylla serrata), Hemoglobin in alcoholism, abnormal A_I fraction produced by addition of aldehyde Hepatocytes or ketone to A_0 fraction (human), $\underline{113}$, 1004dimers, detection by intrinsic fluorescence (human), 116, 712 15-hydroxy-eicosatetraenoic acid transformation into 8,15- and 14,15-isomers (human), 110, 273 -inulin conjugate, oxygen carrying capacity (human), <u>113</u>, 513 112, 356 second derivative Fourier transform infrared spectra (bovine), 115, Stanleyville II mutation, fiber 114, 556 formation inhibition in sickle cells (human), 1<u>11</u>, 8 Hemoglobin A oxygenated B-chain tetramer, pH effect on dissociation (human), 111, 55 subunits, in solution and red cells, 113, 845 carbon monoxide binding, infrared spectroscopy (human), 116, 719 Hemolymph pre-phenoloxidase in plasma, activation by bacterial cell walls or 8-1,3-glucans (Bombyx mori), 113, 562 Hemolysis Hepatomas Cu(II)-induced, 02 requirement (rabbit erythrocytes), 115, 680 Heparan sulfate covalent binding to fibronectin synthesized by human teratocarcinoma cell line, <u>111</u>, 952 relative proportions of four disac-587 charides from mammalian tissue, 111, 865 Heparin fractionation by affinity for heparin cofactor II, <u>112</u>, 663 inhibition of thrombin amidolytic activity, 113, 108 synthetic pentasaccharide, high antithrombin III activity and anti-factor Xa activity, 116, 492 Heptitol Heparin cofactor II binding sites for dermatan sulfate and heparin, comparison with antithrombin III, affinity chromatograph, 112, 663 Heparitinases I and II combined action, heparan sulfate degradation into four di-

```
parinum), 111, 865
  synthetic peptides coupled to tetanus
       toxoid, antibody immunogenicity
       and response specificity (mu-
      rine), <u>117</u>, 908
  aflatoxin B<sub>1</sub> uptake and binding,
       inhibition by metyrapone and glu-
      tathione, stimulation by 1,2-epoxy-3,3,3-trichloropropane (rat), 110, 668
  antitumor aziridine derivative forma-
       tion from 2-bromoethylaminonapho-
       quinone in buffer solution (rat),
  CCl<sub>4</sub>-exposed, ultrastructural
  changes (rat), \underline{114}, 511 cultured, hormonal stimulation effect
      on cytokeratin synthesis (rat),
  cytosolic and microsomal epoxide
       hydrolase activities (rat), 116,
  electrolyte content, experimental hyperthroidism (rat), 115, 232
  membrane lipids, composition (rat),
  nodules, liver carcinogenesis,
      cytosolic polypeptide electro-
      phoretic pattern (rat), 117, 740
  and nonparenchymal cells, methapyri-
       lene intoxication, effect on
      hexokinase and glucokinase
       activity (rat liver), 115, 1090
  AH-66 cells, cAMP-independent protein
      kinases, purification and partial
      characterization (rat), 113, 1010
  cytosolic and microsomal epoxide
      hydrolase activities (rat), 116,
  intact cells, synthesis and intra-
       cellular transport of cyto-
       chrome oxidase subunit IV and
       ADP/ATP translocator protein
       (rat), <u>110</u>, 132
  plasma membrane skeletal framework,
       DNA polymerase activity associa-
  tion (rat), <u>114</u>, 571
thymidine kinase concentration
       increase in comparison with liver (rat), \underline{111}, 280
  and octitol components, identifica-
       tion in lens (human, Octodon
       degu), <u>116</u>, 988
(2R, 5R) - 6 - \text{Heptyne} - 2, 5 - \text{diamine}
  ornithine decarboxylase inhibition
       (rat), 116, 237
Herpes simplex virus type 1
```

helix-destabilizing protein, isola-

saccharides (Flavobacterium he-

```
tion (infected hamster kidney
                                                Histamine
  cells), 116, 327
-infected cells, target for natural
                                                  release, antigen-stimulated,
                                                       phosphatidylinositol turnover
      killer cell activity increased by
                                                       role (rat mast cells), 117, 710
leukotriene B4 (human), <u>113</u>, 531
<u>trans-</u>2-Hexadecanoy1-CoA
                                                Histamine receptors
                                                  H<sub>2</sub>, irreversible and specific inac-
  conversion to palmitate by two forms
                                                       tivation by AH 22216 antagonist
      of enoy1-CoA reductase (rat he-
                                                       (HGT-1 cells), 116, 251
      patic microsomes), <u>113</u>, 659
                                                Histidine
Hexamethylenbisacetamide
                                                  residues, see Histidyl residues
  effect on diphenylhexatriene fluo-
                                                Histidine decarboxylase
      rescence polarization in in-
                                                  inhibition by lecanoric acid analogs
      tracytoplasmic and plasma mem-
                                                       (rat embryo), 110, 733
      branes (murine Friend leukemia
                                                Histidinoalanine
      cells), 117, 294
                                                  N - and N^{\tau}-forms, detection
Hexokinase
                                                       in Ca-binding phosphoproteins as
  and glucokinase, activity in paren-
                                                       crosslinks (estuarine clam Rangia
      chymal and nonparenchymal cells
                                                       cuneata extrapallial fluid), 114,
      after methapyrilene intoxi-
      cation (rat liver), <u>115</u>, 1090
                                                Histidyl-proline diketopiperazine, see
  mitochondria-bindable and non-bind-
      able, hydrophobicity difference
                                                       Cyclo(histidyl-proline)
       (rat brain), 115, 1101
                                                Histidyl residues
Hexosaminidase, see β-N-Acety1-D-
                                                   in cAMP-independent protein kinase
      glucosaminidase
                                                       SPK 380, reversible self-phos-
Hexose
                                                       phorylation (bovine adrenal cor-
                                                       tex), 112, 884
  transport
                                                   essential in ferredoxin, detection by
    β-adrenergic stimulation (murine
       renal cortex), <u>114</u>, 913
                                                       diethylpyrocarbonate modification
    Ca<sup>2+</sup>-dependent stimulation by
                                                       (spinach), 112, 508
       ionophore A23187, 12-0-tetradeca-
                                                Histone Hl
      noylphorbol-13-acetate, and epi-
                                                   interaction with HMG14 and HMG17
      dermal growth factor (murine 3T3 fibroblasts), <u>117</u>, 637
                                                       nonhistones, crosslinking kinet-
                                                       ics, 117, 817
High-density lipoproteins
                                                   latent phosphoprotein phosphatase
  uptake by liver in vitro, impairment
                                                       activity modulation (bovine aor-
       by cigarette smoke (pigeon), 112,
                                                       tic smooth muscle), 117, 493
      843
                                                   phosphorylase phosphatase
High-mobility-group proteins
                                                     heat stable protein activator (calf
  high acidic amino acid region, role in Mg<sup>2+</sup>,Ca<sup>2+</sup>-dependent DNA
                                                       thymus, swine renal cortex), 116,
       unwinding (porcine thymus), 116,
                                                     stimulation (rabbit skeletal
       217
                                                       muscle), <u>117</u>, 501
  HMG 14
                                                   substrate for lysyl oxidase, sodium
    from calf thymus, phosphorylation
                                                       borotritide-reducible residues
       by cGMP-dependent protein kinase
                                                       (calf thymus, rat liver), 115, 186
       from bovine lung, 110, 378
                                                Histone H3
    from chicken erythrocytes, lack of
                                                   protein kinase C inhibition, <u>115</u>, 1027
      phosphorylation by cGMP-dependent
                                                Histone H4
       protein kinase from bovine lung,
                                                   protein kinase C inhibition, 115, 1027
       110, 378
                                                Histones, see specific histones
  HMG 17 phosphorylation during HeLa
                                                Homokaryon
                                                  production by electrofusion, viable fused cell generation (Chinese hamster ovary cells), <u>114</u>, 663
       cell cycle, reexamination, 111,
       1001; erratum, 113, 730
  protective action of HMG1 and HMG2 on
       nuclease S1-sensitive site of
                                                Homopolyribonucleotides
       supercoiled plasmid near human β-
                                                  reaction with carcinogenic aryl-
       globin gene, <u>112</u>, 547
                                                       amines, mediation by prosta-
High-pressure liquid chromatography
                                                       glandin H synthase, 111, 96
                                                sym-Homospermidine
  size-exclusion and ion-exchange,
```

estrogen receptor characterization (rabbit uterus), 115, 988 major polyamine in nitrogen-fixing

cyanobacteria species, 112, 606

indole ring and thiazolium ring

stacking-interaction effect, 116,

1983 Cumulative

structural specificity in stimulating

spermidine auxotroph growth

Subject Index

```
(Escherichia coli), 117, 616
                                                  diffusion by gastric mucus: mucus
  effects on phospholipid unilamellar
                                                      glycoprotein, serum albumin, and
      vesicle mechanical properties,
                                                      IgA roles (canine), 115, 1053
                                                  -Na<sup>+</sup> exchange inhibition by ethyl-
      110, 320
Hormones, see specific hormones
                                                      iospropyl-amiloride (various cell
Horseradish peroxidase
                                                      types), 116, 86
  compound I, temperature dependence of
                                               Hydrogen peroxide
      magnetic circular dichroism spec-
                                                  anion, Cu, Zn superoxide dismutase
                                                  affinity inactivation (bovine liver), \underline{116}, 1107 cytochrome \underline{c} reduction, inhibition by
      trum, 112, 515
  H_2O_2-supported \underline{N}-demethylation of
      aminopyrine, comparison with cy-
      tochrome P-450 action, EPR, 113,
                                                      superoxide dismutase, 111, 231
      332
                                                  effect on Cu, Zn superoxide dismutase
Human chorionic gonadotropin
                                                      electrophoretic variants (bo-
  binding to isolated ovarian nuclei,
                                                      vine), <u>117</u>, 677
      comparison with binding to plasma
                                                  mediation of
      membrane receptors (rat), 111, 127
                                                    human lens crystallin crosslinking
                                                       by heme-undecapeptide from cyto-
  in desensitizing doses, microsomal
                                                       chrome <u>c</u>, <u>113</u>, 592
      and mitochondrial cytochrome
                                                    NADPH oxidation to NADP+ cata-
      P-450 decrease induction in tes-
                                                       lyzed by heme-undecapeptide from
      Tes (mouse), 111, 424
                                                       cytochrome <u>c</u>, <u>113</u>, 710
Human I-cell growth factor, see
                                                  production
      Interleukin 2
Huntington disease
                                                    and catalase biosynthesis,
  glycoprotein M<sub>r</sub> 200,000 release by
                                                       riboflavin deficiency and reple-
      skin fibroblasts in culture (hu-
                                                       tion effects (mammalian), 117, 788
      man), 111, 690
                                                    induction by lignin substrates
                                                       (Phanerochaete chrysosporium),
Hyaluronic acid
  chromatographic fractionation on
                                                       117, 275
                                                    by methemoglobin interaction with ascorbic acid, 111, 980
      DEAE-Sephacel, 112, 168
  degradation, singlet oxygen role
      (human), 115, 894
                                                  -requiring extracellular enzyme
Hyaluronidase
                                                       preparation, lignin biodegrada-
                                                       tion (Phanerochaete chrysosporium),
  activity changes during lung growth,
      injury, and repair (rat), 117, 71
                                                       <u>114</u>, 1077
Hydrocarbons
                                                Hydrogen sulfide
  polycyclic aromatic, phenol-epoxide
                                                  release from Fe-S proteins, induc-
      metabolites, chemical rearrange-
                                                       tion by acidification (Esch-
      ment to quinone-methides, 117, 129
                                                       erichia coli), 112, 66
Hydrochloric acid
                                                Hydrogenases
  secretion by gastric mucosa in vitro.
                                                  Ni(III) chromophore and sulfhydral-
      inhibition by allylisothiocyanate
                                                       containing peptide-Ni(III) com-
      (bullfrog), <u>112</u>, 464
                                                       plexes, ESR, 115, 878
Hydrocortisone
                                                Hydrolases
  \alpha-lactalbumin induction, selective
                                                   lysomal, estradiol benzoate-induced
      enhancement by epidermal growth
                                                       changes (male rat pituitary),
      factor (rat mammary explant),
                                                       116, 230
      117, 524
                                                Hydroperox ides
                                                   organic, stimulation of oxygen con-
  stimulation of casein mRNA accumula-
      tion in mammary tissues
                                                       sumption by microsomes, cyto-
       (adrenalectomized virgin rats),
                                                       chrome P-450 role (rat liver),
      <u>114</u>, 380
                                                       <u>110</u>, 646
Hydrogen
                                                5-Hydroperoxyeicosatetraenoic acid
  active, content in various compounds,
                                                   cytochrome P-450 catalyzed conversion
      fast atom bombardment spectrom-
                                                       to leukotriene B4, leukotriene
      etry following hydrogen-deuteri-
um exchange, <u>112</u>, 126
                                                       A4 intermediate (rabbit liver),
                                                       115, 995
```

12-Hydroperoxytetraenoic acid

-D exchange reaction of thiamin,

```
formation, glutathione peroxidase and
                                             N^6-(4-Hydroxy-3-methyl-but-2-enyl)-
      lipoxygenase pathway coupling
                                                    adenosine
      (selenium-deficient rat plate-
                                                tRNA, monoclonal antibodies, char-
      lets), 117, 183
                                                    acterization (bovine, murine),
                                                    <u>114</u>, 791
Hydroxamic acids
                                             3-Hydroxy-3-methylglutaryl-CoA reduc-
  substrate for peroxidase reactions,
                                                    tase (NADPH)
      116, 916
                                                in inherited diabetes
β-Hydroxyaspartic acid
                                                  hepatic, loss of circadian rhythm
  residue, vitamin K-dependent plasma
                                                    (mouse), <u>113</u>, 638
      zymogens (bovine, human), 115, 8
                                                  intestinal, increased activity
γ-Hydroxybutyrate
                                                    causing cholesterol synthesis
  binding by brain subcellular
                                                    stimulation (mouse), 113, 638-
      fractions (rat), <u>110</u>, 262
                                                inhibition by dietary carbohydrates,
7β-Hydroxycholesterol
                                                    role in cholesterol synthesis de-
  cytotoxicity, serum lipoprotein role
                                                    pression and triglyceride forma-
      (rat cultured hepatoma cells),
                                                    tion increase (rat liver), 113,
      117, 851
                                                    888
18-Hydroxycorticosterone
                                                reversible phosphorylation (rat
  plasma, corticotropin-induced in-
                                                    hepatoma), 114, 473
      crease, elimination by antisera
      to Y3-melanotropin (normoten-
                                              17 α-Hydroxyprogesterone
                                                metabolism in adrenal microsomes
      sive and spontaneously
      hypertensive rats), 110, 357
                                                    (porcine), 111, 512
5-L-Hydroxy-6,8,11,14-eicosatetraenoic
                                              25-Hydroxyvitamin Da
                                                conversion by renal microsomes to
  potentiation of neutrophil degranula-
                                                    unidentified metabolite and
      tion by platelet-activating
                                                    25,26-dihydroxyvitamin D<sub>3</sub>
      factor (human), 111, 1
                                                    (rat), <u>110</u>, 766
15-Hydroxy-eicosatetraenoic acid
                                              Hygromycin B
  hemoglobin-catalyzed transformation
                                                phosphotransferase encoding gene,
      into 8,15- and 14,15-isomers (hu-
                                                    molecular cloning and expression
      man), 110, 273
                                                    in Streptomyces lividans (Strep-
Hydroxyeicosatetraenoic acids
                                                    tomyces hygroscopicus), 117, 6
  conversion from arachidonic acid by
      aortic smooth muscle cells (rab-
                                              Hypertension
      bit), 112, 242
                                                essential, additional plasma protein
2-Hydroxyestradio1
                                                    isolation and purification (hu-
  failure to reverse dopamine inhibi-
                                                    man), 111, 1015
      tory effect on prolactin
                                                spontaneous, increased activity of
      secretion by pituitary adenoma-
                                                    plasma acetylhydrolase, effect on
      tous cells (human), 112, 42
                                                    platelet-activating factor (rat),
D-2-Hydroxyisovaleryl-N-methylvaline
                                                    113, 666
  intermediate in enniatin B enzymatic
                                              Hyperthyroidism
      synthesis, 110, 292
                                                experimental, hepatocyte electrolyte
17α-Hydroxylase, see Steroid 17 α-mono-
                                                    content (rat), 115, 232
      oxygenase
                                              Hypochlorous acid
Hydroxyl radicals
  catalase probe, superoxide-dependent
                                                free, formation with halide-stimulated
                                                    chloroperoxidase activity, 116,
      lipoperoxidation (bovine, human),
      117. 901
                                                    873
  generation by
                                              Hypohalous acid
                                                generation by chloroperoxidase during
    acetaldehyde-xanthine oxidase
                                                    halohydrin isomer formation, 110,
      systems, leukotrienes B4, C4,
      D_4, and E_4 inactivation, \underline{110},
                                              Hypoiodous acid
      266
                                                peroxidase-activated, in tyrosine
    adriamycin semiquinone and
                                                    iodination, 116, 639
      H_2O_2, role in cardiotoxicity
      (rat cardiac mitochondria), 114,
                                             Hypothalamus
      197
                                               rimorphin existence with dynorphin A
    methemoglobin interaction with
                                                    and \alpha-neo-endorphin (human), 113,
      ascorbic acid, mechanism, 111, 980
```

I

and cyclooxygenase pathways (rat

Thunwafan	neutrophils from reverse passive
Ibuprofen differential effects on arachidonic	Arthus reaction pleural exu-
	dates), $\frac{112}{5}$, 586
acid metabolism via lipoxygenase	inhibition of
and cyclooxygenase pathways (rat neutrophils from reverse passive	ADP-stimulated vascular prostacy- clin synthesis (rabbit aorta,
Arthus reaction pleural exu-	
dates), 112, 586	pulmonary artery; rat aorta), 112, 284
Imidazo[1,5-a]pyridine-5-hexanoic acid	glutathione transferase, kinetics
(CGS 138080)	(rat liver), 112, 980
selective inhibition of thromboxane	Inhibitors, see specific inhibitors
synthetase in platelets in vitro	Inflammation
(human) and in vivo (rat), 112,	turpentine-induced, serum α-feto-
899	protein and haptoglobulin changes
Immune response	(rat neonate), <u>110</u> , 796
epitope specific, by synthetic	Infrared spectroscopy
streptococcal antigen without	Gramicidin A incorporated into
carrier or adjuvant (mouse), <u>117</u> ,	phospholipid suspensions as
359	channel structure, single-
Immunoassays	stranded-pb-helical conforma-
enzyme, separation-free, antibody-	tion, <u>114</u> , 373
induced conformational restric-	Initiation factor
tion (rabbit), <u>114</u> , 1097	from Streptomyces aurefaciens,
Immunoglobulins	initiation complex formation in-
IgA, role in hydrogen ion diffusion	duction, GTP-dependent stimula- tion by UTP, 114, 222
by gastric mucus (canine), <u>115</u> , 1053	Inosine
IgD, Fc region, structure and	effect on growth inhibitory action of
location of asparagine-linked	5-fluorouracil (Jensen tumor
oligosaccharides (human), 110,	cells), 112, 235
181; erratum, 112, 794	myo-Inositol
IqG	incorporation in phosphatidylinositol
λ chain, amino acid sequences of	
fragment from peptic cleavage in	in CMP presence, Mn ²⁺ -depen-
urea (human), 111, 89	dent activity (rat brain syn-
tuftsin-containing peptide	aptosomes), $\underline{112}$, 817
fragments, synthesis and biologi-	Inositol hexaphosphate
cal activity (mouse), 115 , 193	effect on Soret magnetic circular
IgM, ASN 563 glycosylation (mouse),	dichroism spectra of methemo-
116, 771	globin complexes and subunits,
λ-light chains, amino acid sequence	ferric heme spin state dependence
(human urine), <u>117</u> , 587	(human), <u>114</u> , 318 Inositol phosph ate
Immunoprecipitation	formation, stimulation by glucose,
nitrate reductase from roots and leaves, properties (spinach),	2-ketoisocaproate, and carbamyl-
113, 733	choline (rat pancreatic islets),
	116, 9
Indole ring	Insulin
 -thiazolium ring stacking interac- tion, effect on thiamin H-D 	-activated cAMP phosphodiesterase,
exchange reaction, 116, 486	regulation by pertussis toxin
Indolic compounds	(3Ť3-L1 adipocytes), 116, 593
superoxide-catalyzed oxidation, spin-	antagonists, receptor kinase activity
trapping of nitrogen-centered	regulation (porcine), 115 , 245
free radical, ESP, <u>114</u> , 168	binding
Indomethacin	to adipocytes, reduction by nor-
acceleration of proton exchange	adrenalin (rat), 112, 972
between octanol and water, cor-	<pre>and endocytosis activity in compactin-resistant mutants</pre>
relation with anti-inflammatory	(Chinese hamster), 117, 13
activity, <u>113</u> , 745 differential effects on arachidonic	to erythroleukemia cell line K-562,
acid metabolism via lipoxygenase	characterization (human), 117, 823
actu metabotism via ripoxygenase	· · · · · · · · · · · · · · · · · · ·

```
to liposome outer surface (bovine),
                                                  teleocidin and 12-0-tetradecanoyl-
    117, 399
                                                    phorbol-13-acetate effects (rat
                                               pancreatic islet), 117, 78 -stimulated phosphorylation
carbamoyl-phosphate synthetase activ-
     ity restoration in diabetic
    liver, prevention by actinomycin (rat), \underline{114}, 255
                                                  of insulin receptor precursor (rat
                                                    liver), <u>116</u>, 417
chemical mediator, lipid synthesis stimulation, insulin receptor
                                                 of insulin receptor β-subunit
                                                    (human monocyte, monocyte-like cell lines), 115, 560
    down regulation (rat hepato-
                                                 of phosphoprotein m (rat adipose
    cytes), <u>115</u>, 375
degradation
                                                    tissue), 117, 758
  cell-mediated, by protease: Ca and
                                                 of serine residues on insulin
    endogenous inhibitor effects (rat
                                                    receptors (human hepatoma cells).
    skeletal muscle cytosol), 116, 195
                                                    116, 1129
  hepatic protein-disulphide reduc-
                                               stimulation of
    tase (glutathione) latent and
                                                 casein and \alpha-lactalbumin synthesis
    nonlatent activity during
                                                    in mammary explants, simulation
    perinatal development and liver
                                                    by anti-insulin receptor serum
    regeneration (rat), 116, 909
                                                    (pregnant mouse), 111, 988
effect on
                                                  malic enzyme mRNA activity in
  cytokeratin synthesis (rat cultured
    hepatocytes), <u>114</u>, 556
                                                    diabetic liver (rat), 112, 176
                                                  protein synthesis, prostaglandin
  \alpha-lactalbumin induction, selec-
                                                    F<sub>2</sub> effect (rabbit muscle), 116,
    tive enhancement by epidermal
                                                    1084
    growth factor (rat mammary
                                                  pyruvate dehydrogenase activator
    explant), 117, 524
                                                    release from liver particulate
  tRNA<sup>lys</sup> modifications (BALB/C 3T3
                                                    fraction (rat), 112, 35
    cells), 115, 598
                                                  soluble guanylate cyclase in vitro
generation of pyruvate dehydrogenase
                                                    (rat liver), 114, 282
    inhibitor, high fat diet and
                                                  thiol:protein disulfide oxidoreduc-
    dexamethasone effects (rat
                                                    tase in cultured fibroblasts (hu-
    liver), <u>117</u>, 456
                                                    man skin), 111, 872
internalization by cultured lympho-
                                             Insulin-like growth factor-1 receptors
    cytes, similarity with Fab
                                               binding affinity, Ca effect (human
    component from insulin receptor
                                                    placental microsomal membrane),
    antibodies (human), 114, 230
                                                    116, 63
                                             Insulin protease
mimickers, receptor kinase activity
    regulation (porcine), 115, 245
                                               Ca-dependent, endogenous inhibitor
                                                    characterization (rat skeletal
primary structure, fast atom bombard-
    ment high field magnetic mass
                                                   muscle cytosol), 116, 195
    spectrometry, 117, 299
                                             Insulin receptors
regulation of cytosolic acetyl-CoA
                                               binding affinity, Ca effect (human
    carboxylase by induction of low-
                                                    placenta microsomal membrane),
    molecular-weight mediator release
                                                    <u>116</u>, 63
    from plasma membranes (rat
                                               binding properties (rat liver), 114,
    liver), <u>110</u>, 789
                                                    1042
release, stimulation by epoxyeicosa-
                                               cAMP binding modulation, insulin
    trienoic acids (rat pancreatic
                                                    resistance induction of glucose
    islet), 114, 743
                                                    transport (rat adipocytes), 115,
requirement for casein mRNA accumu-
    lation (rat), <u>116</u>, 994
                                               down regulation by insulin chemical
secretion
                                                   mediator (rat hepatocytes), 115,
  ionophore A23187 and 12-0-tetradec-
                                                   375
    anoyl-phorbol-13-acetaTe combined
                                               insulin-stimulated phosphorylation
    effects, comparison with glucose
                                                 of precursor (rat liver), 116, 417
                                                 of B-subunit (human monocyte,
    (rat islet), 117, 448
```

560

monocyte-like cell lines), 115,

kinase activity regulation by insulin

K 562 cell line, characterization

(human), 117, 823

by isolated pancreatic islets,

rat), 112, 684

glucose-induced, stimulation by

islet-activating protein from

Bordetella pertussis (neonatal

```
mimickers and antagonists (por-
                                                  and interferon & production by
                                                       lymphocytes treated with phyto-
       cine), <u>115</u>, 245
  levels in compactin-resistant
                                                       hemagglutinin and teleocidin (hu-
                                                       man blood), <u>111</u>, 498
      mutants (Chinese hamster), 117, 13
                                                  recombinant, enhancement of natural
  95,000-dalton subunit, insulin-like
                                                       killer cell activity, similarity
       phosphorylation stimulation by
                                                       to natural interferon y (human),
       vanadate (rat adipocytes), <u>113</u>, 80
                                                       <u>111</u>, 525
  phosphorylation reversibility, pro-
                                                Interferon &
       tein phosphatase activity (rat
                                                  antigenic distinction, production by
       liver), <u>117</u>, 885
                                                       peripheral blood lymphocytes
  serine residues, phosphorylation,
                                                       treated with phytohemagglutinin
       insulin effect (human hepatoma
  cells), <u>116</u>, 1129
in skeletal muscle plasma membranes
                                                       and teleocidin (human), 111, 498
                                                Interleukin 1
      during purification (rabbit), 112, 521
                                                  effect on sheep erythrocyte immune
                                                       response in macrophage-depleted
Interferon
                                                       cultures (mice), 114, 721
                                                Interleukin 2
  calmodulin decrease induction in
                                                  gene, isolation and amino acid
      synchronized cell lines sensitive
                                                      sequence (human), 117, 114
       to antiproliferative effect, 111,
                                                  mitogenesis induction in phytohemag-
      430
                                                      glutinin-treated thymocytes
  -induction-specific sequences, cDNA
                                                       (mouse), <u>114</u>, 93
      clones, mitochondrial rRNA gene
                                                  mRNA cloning, cDNA amino acid sequence (human tonsils), 115,
       resemblance (human placenta),
      114, 670
                                                      1040
  inhibition of ornithine decarboxylase
       (human fibroblast cells), 114, 950
                                                  post-translational modification of
                                                      position 3 amino acid, 116, 1049
  N-terminal synthetic peptide, anti-
                                                  production by tumor promoter-treated
      body production and charac-
                                                      thymocytes, inhibition by cell-
      terization (mouse), 117, 866
                                                      ular cAMP-increasing agents (mouse), 114, 93
  and prostaglandins, antiviral action
       (virus-infected murine cells),
                                                Intrinsic factor
      116, 442
                                                  ^{125}I-labeled, binding to ileal
  subtypes obtained by gene cloning in
                                                      brush border membrane (rat), 115,
      Escherichia coli, anti-
                                                      238
      proliferative and antiviral
                                                Inulin
      effects (human), 112, 537
                                                  -hemoglobin conjugate, oxygen
  -treated vesicular stomatitis
                                                      carrying blood substitute, 113,
      virus-released cells, low infec-
      tivity, glycoprotein deficiency
                                                Iodide
      role (human, murine), 117, 161
                                                  stimulation of
Interferon a
                                                    lactoperoxidase catalytic activity,
  induction by synthetic heat-
                                                      <u>112</u>, 475
      treated dsRNA (poly I:poly C)
                                                    thyroid peroxidase catalytic
      (human lymphocytes), <u>110</u>, 851
  subtypes A, C, D, and hybrid mole-
                                                      activity (porcine), 112, 475
      cules, differential binding to
                                                Iodide peroxidase
      receptors on lymphoblastoid cells (human), \underline{110}, 537
                                                  and dimethylaniline monooxygenase,
                                                      role in 1-methyl-2-thioimidazole
                                                      metabolism (porcine thyroid),
Interferon a receptor
                                                      116, 449
  differential affinity for interferon
                                               Ionomycin
      α subtypes A, C, D, and hybrid
                                                 -Ca<sup>2+</sup> complex, conformational
      molecules (human Daudi cells),
      110, 537
                                                     change, mediation by lipid-water
Interferon B
                                                     interface, <u>114</u>, 632
  -injected HeLa cells, antiviral state
                                               Ionophore A23187
      induction failure (human), 110,
                                                 Ca<sup>2+</sup>-dependent stimulation of hex-
  plasma membrane fluidity increase in
                                                     ose transport (murine 3T3 fi-
      L cells, fluorescence assay (mouse), 110, 88
                                                     broblasts), <u>117</u>, 637
                                                 effect on
Interferon y
                                                   aldosterone secretion, angiotension
```

```
II, and 12-0-tetradecanoyl-phor-
                                                 Ischemic injury
      bol-13-acetate (porcine adrenal
                                                   kidney, during storage
    gland), 116, 555
phospholipid metabolism in mast
cells, connection with Ca<sup>2+</sup> up-
                                                     DNA damage protection by nicotinic
                                                        acid, elimination by 3-aminobenz-
                                                        amide (mouse), <u>113</u>, 996
      take and histamine release (rat), 111, 581
                                                     NAD decrease, nicotinic acid role
                                                        in DNA damage (mouse), 113, 996
  stimulation of
                                                 Islet-activating protein
    Ca transport in plasma membrane of
                                                   from Bordetella pertussis, stimula-
      wheat protoplasts, 113, 171
                                                       tion of glucose-induced insulin
    neutrophils, arachidonic acid
                                                       secretion and lipid-associated
      release from platelet-activating
                                                       Ca<sup>2+</sup> ionophoretic activity
      factor (rabbit), \underline{113}, 72
                                                        (neonatal rat pancreatic islets),
    prostaglandin and cAMP production
                                                       112, 684
       in macrophages, inhibition by
                                                 Islets of Langerhans, see Pancreatic
      trifluoperazine and verapamil
                                                       islets
       (rat), 114, 248
                                                 Isocitrate
    serotonin release and phosphoryla-
                                                   protective mechanism against Ca<sup>2+</sup>
      tion of 20K and 40K proteins
                                                       and phosphate flux damage in
       (human platelets), 112, 778
                                                       liver mitochondria (rat), 115, 749
  and 12-0-tetradecanoyl-phorbol-13-
                                                 Isocitrate dehydrogenase (NADP+)
      acetate, combined effects on
                                                   adrenalectomy and dexamethasone
      glucose secretion, comparison
                                                       effects in vivo (rat testes),
      with glucose (rat islet), 117, 448
                                                       115, 606
Ionophores
                                                N^6 - (\Delta^2 - Is opentenyl) adenosine
  in fraction isolated from uremic
                                                   tRNA, monoclonal antibodies to,
      plasma and normal urine (human),
                                                       characterization (bovine, mu-
      111, 326
                                                       rine), 114, 791
  15-0_{\overline{5}} macrocyclic polyether deriva-
                                                 Isoprenoids
      tives, Na<sup>+</sup> permeability
      induction in large unilamellar
                                                   biosynthesis by soil bacteria grown
                                                       on mevalonate, <u>110</u>, 187
      vesicles, <u>116</u>, 981
                                                 Isoproterenol
  silicate, isolation from organic
                                                   inhibition of low-density lipoprotein
      extract of apochlorotic diatom
  (<u>Nitzschia alba</u>), <u>114</u>, 365
synthetic crown ether carboxylic acid
                                                       binding and internalization, syn-
                                                       thesis of cholesterol and choles-
      and lasalocid, synergism in Pr<sup>3+</sup> transport, 117, 340
                                                       teryl esters (human fibroblasts).
                                                       112, 795
                                                   pretreatment of pituitary tumor
                                                       cells, time- and dose-dependent
  binuclear, at functional site of
                                                       desensitization of B2-adrener-
      azidosemimethemerythrin, oxida-
                                                       gic receptors, effect on adreno-
      tion state EPR, 112, 954
                                                       corticotropin release (mouse).
  effect on microsome oxidation of
                                                       111, 112
      hydroxyl radical scavenging
                                                   stimulation of
      agents and ethanol (rat liver),
                                                     adenylate cyclase activity without
      116, 765
                                                       affecting membrane phospholipid
  hepatic, effect of Cu-chelating
                                                       methylation (myogenic cell
      drug treatment (rat), 113, 127
                                                       lines), 114, 339
  ions, see Ferrous ion (Fe^{2+}) and Ferric ion (Fe^{3+})
                                                     cAMP accumulation, inhibition by
                                                       somatostatin, pertussis toxin ef-
  uptake by reticulocytes, NH4Cl
                                                       fect (murine anterior pituitary
      effect (rat), 113, 650
                                                       tumor cells), <u>115</u>, 794
Iron(III)
                                                     cAMP synthesis and adrenocortico-
  effect on Ca, Zn superoxide dismutase
                                                       tropin secretion by pituitary
      electrophoretic variants (bo-
                                                       tumor cells, inhibition by
      vine), <u>117</u>, 677
                                                       carbachol, restimulation by
  incorporation into apoferritin,
                                                       atropine (mouse), <u>114</u>, 289
      effect of ferroxidase, 116, 244
                                                Isotope fractionation
Iron-sulfur proteins
                                                  in conversion of mono- and disac-
  cysteine role in sulfide sulfur
                                                       charides to alcohols, <sup>2</sup>H NMR
      supply (Escherichia coli), 112, 66
                                                       quantitation, 111, 890
```

Isotyrosine protease from rodent Murphy-Sturm lymphosarcoma (rat plasma), 112, formation in cell wall during insolubilization of hydroxy-Kinins proline-rich glycoprotein (carrot T-, bradykinin-containing: isolation. root slices), <u>112</u>, 161 Isovaleric acid purification, and composition (rat plasma), 112, 701 inhibition of enniatin enzymatic synthesis by N-isovaleryl-N-Kupffer cells methyl valine formation, 110, 292 membrane lipids, composition (rat), 113, 845 J L Jasmonic acid Lac repressor formation from 12-oxo-phytodienoic headpiece binding to poly[d(A-T)], acid (Vicia faba pericarp), 111, thermal denaturation study (Esch-470 erichia coli), 110, 169 Juvenile hormone Laccase role in microvitellogenin appearance function of different Cu types. and uptake (Manduca sexta), 117, $^{
m l}$ H NMR relaxation study (Rhus vernicifera), 111, 824 type 2 Cu-depleted (T2D), binuclear Cu site K Cu(I) determination by X-ray absorption edge spectroscopy Kallikrein (Rhus vernicifera), 112, 737 amydolytic activity, effects of in met laccase and azide-bound antithrombin III, α1-proteinase derivatives, EXAFS investigation (Rhus vernicifera), 112, 746 inhibitor, and heparin, 113, 108 cleavage of methionine-enkephanitrite reactivity, EPR study of line-containing peptide BAM 22P, met-NO2 derivatives (Rhus vernicifera), 112, 729 kinetic constants (equine urine, porcine pancreas), 112, 366 reductively decoupled type 3 site, Keratan sulfate EPR study (Rhus vernicifera), -like glycoconjugates in cerebral cortex, localization in micro-114, 57 α-Lactalbumin somes (rat), <u>111</u>, 28 Keratinocytes and homologous mRNA in epididymis (rat), 117, 306 vitamin D₃ production in vitro induction by insulin, hydrocortisone, (human), 115, 444 and prolactin, selective enhance-Ketoconazole ment by epidermal growth factor binding to intracellular cortico-(rat mammary explant), 117, 524 steroid-binding protein (Candida synthesis in mammary explants albicans), 117, 43 insulin-stimulated, simulation by Ketogenesis anti-insulin receptor serum fatty acid, Ca concentration effect (pregnant mouse), <u>111</u>, 988 (rat liver mitochondria), 116, 173 with insulin and prolactin, 2-Ketoisocaproate inhibition by cortisol, reversal stimulation of inositol phosphate by prostaglandin E_2 or $F_{2\alpha}$ production (rat pancreatic (mouse), <u>111</u>, 1059 islets), 1<u>16</u>, 9 6-Keto-prostaglandin $F_{1\alpha}$ Lactate release, stimulation by insulinoblood, in fetus and during postnatal development (rat), 113, 672 tropic glucose concentration (rat Lactate dehydrogenase pancreatic islet), 114, 1023 isozyme X, inhibition by gossybol, 2-Keto-4-thiomethylbutyric acid kinetics (bovine), <u>115</u>, 180 oxidation by microsomes, EDTA and Fe Lactogenic receptors effects (rat liver), 116, 765 ¹²⁵I-labeled somatotropin binding Kinase II, see Protein kinase, calmoduspecificity (rat liver), 115, 29 lin-dependent **B-Lactoglobulin** Kininogen effect on oleate binding to hepatic vasoactive peptide production by acid

```
-qlycolipid interaction, detection
       sinusoidal membranes in vitro
(rat), <u>112</u>, 88
β-Lactoglobulin A
                                                          (<u>Bandeiraea simplicifolia, Helix</u>
                                                          pompatia, soybean), 115,
  second derivative Fourier transform
                                                     from horseshoe crab serum,
       infrared spectra (bovine), 115,
                                                          Polyphemin Polyphemin
                                                     immobilized, glycoprotein binding
Lactoperoxidase
                                                          decrease after radioiodination,
  activity with SCN-, 116, 568
                                                          110, 103
   iodide-dependent catalytic activity,
                                                     metal ion content, effect on binding
       112, 475
                                                          activity, 115, 1069
Lactosaminoglycans
                                                   Lens
  covalent binding to fibronectin
                                                     capsule, in vivo glycosylation
       synthesized by human teratocar-
                                                          (normal, diabetic human), 117, 51
       cinoma cell line, 111, 952
                                                     heptitol and octitol components,
Lactose synthase
                                                          identification (human, Octodon
  inhibition by 5-azacytidine in
                                                          degu), 116, 988
       differentiating <u>in vitro</u> mammary
                                                   Leucine
       gland (mouse), <u>111</u>, 150
                                                     ^{15}N-labeled, [^{15}N]glutamate
Lactosylcerebroside
                                                          source in cerebellar explants
  included in liposomes, stimulation of
                                                          (mouse), 115, 174
       liposome removal from circulation
                                                   Leucine aminopeptidase, see Amino-
peptidase (cytosol)
       and uptake into liver (mouse),
       110, 140
                                                   Leucine-enkephalin (Leu-enkephalin)
Laminin
                                                     antagonist in norepinephrine-induced
  isolation of components from basement
                                                          Ca<sup>2+</sup> accumulation (rat atria),
       membranes without prior protease
                                                          117, 536
       digestion (human amnion, chorion, chorionic microvessels), 112, 1091
                                                     immunoassay with specific monoclonal
                                                          antibodies, 113, 757
Laminin receptor
  isolation from tumor cells (BL6 murine melanoma), \underline{111}, 804
                                                   L-Leucinthiol, see 2-Amino-4-methyl-1-
                                                          pentanethiol
                                                   Leukemia
Lanosterol
                                                     erythrocyte K562 cell line, insulin
  14a-demethylation by cytochrome
                                                     binding, characterization (hu-
man), 117, 823
Jurkat T-cell, growth factor,
isolation and characterization
       P-450, inhibition by buthiobate
       (Saccharomyces cerevisiae), 115,
       642
                                                          (human), 117, 623
B-Lapachone
                                                     promyelocytic, see Promyelocytic
  inhibition of DNA synthesis and
       thymidylate synthase after methyl
                                                          leukemia cells
       methane sulfonate DNA damage (hu-
                                                   Leukocytes
       man), <u>117</u>, 30
                                                     common antigen T200, <u>O</u>-glycosidically
Lasalocid
                                                          linked oligosaccharides of poly-
and synthetic crown ether carboxylic
acid, synergism in Pr<sup>3+</sup> trans-
port, 117, 340
Lecanoric ac<sup>7d</sup>
                                                          N-acetyllactosamine type,
                                                          differences in B and T cells (hu-
                                                          man), 110, 424
                                                     intact, 15-hydroxy-eicosatetraenoic
  analogs, inhibition of
                                                          acid transformation into 8,15-
    arachidonic aci'd release induced by
                                                          and 14,15-isomers, comparison
       tumor promoter (C3H1OT1/2 cells).
                                                          with hemoglobin catalytic activi-
       <u>110</u>, 733
                                                          ty (human), 110, 273
    delayed hypersensitivity (mouse),
                                                     polymorphonuclear, see Neutrophils
       110, 733
                                                   Leukotriene A
    histidine decarboxylase (rat embryo), 110, 733
                                                     formation from arachidonic acid,
                                                         hemoglobin-catalyzed transforma-
    prostaglandin synthase (ovine
                                                         tion of 15-hydroxy-eicosatetrae-
                                                         noic acid to 8,15- and 14,15-isomers (human), 110, 273
       seminal vesicles), 110, 733
Lectins
  from different plants, binding to rat
                                                  Leukotriene A<sub>4</sub>
       intestinal microvillus membranes
                                                     intermediate in cytochrome P-450-
       during postnatal development,
                                                         catalyzed conversion of 5-hydro-
       113, 391
                                                         peroxyeicosatetraenoic acid to
```

```
leukotriene B4 (rabbit liver),
                                                       xanthine oxidase systems, 110, 266
       115, 995
                                                  LTD4 analog effect (guinea pig),
Leukotriene B<sub>4</sub>
                                                       117, 732
                                                Leukotrienes, see also specific
  chemotactic and degranulating
                                                       leukotrienes
       activities for human neutrophils
       (guinea pig leukocytes), <u>117</u>, 282
                                                  acid secretion stimulation (rabbit
  generation, selectivity (canine
                                                       gastric parietal cells), 114, 897
       tracheal epithelial cells), 114,
                                                  production by neutrophils incubated
                                                       with dihomo-γ-linolenic acid (hu-
  highly purified, chemotactic potency
                                                       man), <u>114</u>, 855
       reevaluation (human lymphocytes),
                                                  radioimmunoassay (guinea pig lung),
                                                       117, 574
       110, 842
  5-hydroperoxyeicosatetraenoic acid
                                                Leumorphin
       cytochrome P-450-catalyzed con-
                                                  preproenkephalin B-derived endogenous
       version, leukotriene A4 inter-
                                                      opioid peptide, characterization
      mediate (rabbit liver), 115, 995
                                                       (porcine pituitary), 117, 695
                                                Leupeptin
  inactivation by hydroxyl radicals
                                                  cathepsin B strong stimulation in
       generated by two acetaldehyde-
                                                       <u>vivo</u> (mouse heart, kidney, Tiver,
       xanthine oxidase systems, 110, 266
                                                      striated muscle), 110, 332; erra-
  metabolism by hepatic cytochrome
                                                      tum, 112, 347
       <u>P</u>-450 (rat), <u>114</u>, 850
                                                Leydig cells
  stimulation of
                                                  tyrosine-specific protein kinase
    natural killer cell activity toward
       target cells infected with herpes
                                                      activity (rat), <u>116</u>, 400
                                                LH-RH, see Luteinizing hormone-
       simplex virus (human), 113, 531
    neutrophils, intracellular free
                                                      releasing hormone
      Ca<sup>21</sup>
                                                Ligand
          ˈincrease (human, rabbit),
                                                  internalization by low density and
      113, 44
Leukotriene B5
                                                       scavenger lipoprotein receptors
                                                       (human monocyte macrophages),
  eicosapentaenoic acid-derived,
      chemotactic and degranulating ac-
                                                      116, 626
       tivities for human neutrophils
                                                Light
                                                  activation of water-oxidation system
       (quinea pig leukocytes), 117, 282
                                                      and photosystem II electron transport, Ca<sup>2+</sup> effect (dark-
Leukotriene Ca
  inactivation by hydroxyl radicals
                                                      grown Picea abies chloroplasts),
       generated by two acetaldehyde-
                                                      116, 803
       xanthine oxidase systems, 110, 266
  LTD4 analog effect (guinea pig),
                                                  cGMP hydrolysis induction by 3':5'-
      117, 732
                                                      cyclic-nucleotide phospho-
  -stimulated prostacyclin biosyn-
                                                      diesterase, dependence on Ca<sup>2+</sup>
      thesis, agonist-specific
                                                       (bovine retinal rod outer seq-
      desensitization (human endo-
                                                      ment), 113, 317
      thelial cells), 117, 780
                                                Lignin
                                                  biodegradation, extracellular
Leukotriene C<sub>4</sub> receptors
                                                      H<sub>2</sub>O<sub>2</sub>-requiring enzyme prepar-
  identification in lung (guinea pig),
                                                      ation (Phanerochaete chrysospori-
      116, 1136
                                                      um), <u>11</u>4, 1077
Leukotriene D<sub>4</sub>
                                                  model compound, degradation by
  analog effect (guinea pig), 117, 732
                                                      Phanerochaete chrysosporium cul-
  conversion from arachidonic acid by
                                                      ture or in photochemical system,
      alveolar macrophages, increase in
                                                      111, 200
      allergic bronchial asthma (hu-
                                                  substrates, H<sub>2</sub>O<sub>2</sub> production induc-
      man), 111, 518
                                                      tion (Phanerochaete chryso-
  inactivation by hydroxyl radicals
      generated by two acetaldehyde-
                                                      <u>sporium</u>), <u>117</u>, 275
      xanthine oxidase systems, <u>110</u>, 266
                                                Linoleate hydroperoxide
Leukotriene D4 receptors
                                                  stimulation of oxygen consumption by
  identification in lung (guinea pig),
                                                      microsomes, cytochrome P-450 role (rat liver), 110, 646
      116, 1136
Leukotriene E4
                                                Linoleic acid
  inactivation by hydroxyl radicals
                                                  lipoxygenase-catalyzed conversion to
      generated by two acetaldehyde-
                                                      12-oxo-phytodienoic acid (Vicia
```

```
<u>faba</u> pericarp), <u>111</u>, 470
                                                       detection by thiobarbituric acid
  incorporation into plasma membrane
                                                       and conjugated diene methods (rat
      phospholipids, effect on ATPase
                                                       liver), <u>111</u>, 854
                                                  NADPH-dependent, correlation with
      activities and physical proper-
                                                      cytochrome P-450 degradation (bo-
      ties (rat liver), 117, 809
                                                       vine adrenal cortex mitochon-
  oxygenation to vicinal dihydroxy
      acids with NADPH (rabbit hepatic
                                                      dria), 110, 559
      microsomes), 111, 644
                                                  superoxide-dependent, OH· probes,
Lipids
                                                       catalase inhibition mechanisms
  bilayer membrane
                                                       (bovine, human), 117, 901
    acetylcholine receptor exposure (Torpedo californica), 115, 1075
                                                Lipophorin
                                                  denaturated, pre-phenoloxidase
    dynamics, rhodopsin-lipid
                                                       activation (silkworm hemolymph
                                                      plasma), <u>113</u>, 562
      interactions, high-resolution
                                                Lipoprotein lipase
      solid-state <sup>13</sup>C NMR (bovine
                                                  hydrolysis of dihexanoyl- and dihepta-
      retina), <u>114</u>, 1048
                                                      noyl-phosphatidylcholine,
  membrane, composition in hepatocytes,
                                                      unaffected by apolipoprotein C-II
      Kupffer cells, and endothelial cells (rat), \underline{113}, 845
                                                  (bovine milk), 113, 811 inhibition by RHC 80267
  mobilization, stimulation by locust
                                                     intact platelets (human), 116, 68
      adipokinetic hormone (Manduca
                                                     in thrombin-activated platelets,
      <u>sexta</u>), 115, 924
                                                       effect on arachidonic acid re-
  neutral fraction, fatty acid
                                                       lease induction (human), 113, 241
      incorporation increase in measles
                                                Lipoprotein receptors
      virus persistently-infected BGM
                                                   low density and scavenger, ligand
      cells, 112, 29
                                                       internalization (human monocyte
  peroxidation, see Lipoperoxidation
                                                       macrophages), 116, 626
  planar bilayers doped with colicin A,
                                                Lipoproteins
      two classes of time- and voltage-
                                                  high-density, see High-density lipo-
      dependent conductance, 113, 765
                                                       proteins
  -steroid interactions in phospholipid
                                                   interaction with 1-β-D-arabinofura-
      vesicles, fluorescence anisotropy
                                                       noyslcytosine-5'-diphosphate-L-1,2-
      study, <u>113</u>, 799
                                                       diacylglycerol (canine, human
  synaptosome membrane, developmental
                                                       serum), <u>116</u>, 368
      spin label study (rat brain cor-
                                                  low-density, see Low-density lipo-
      tex), <u>117</u>, 688
                                                       proteins
  synthesis
                                                  serum, effect on 7β-hydroxycholesterol
    inhibition by 2,4-dinitrofluoro-
                                                       cytotoxicity (rat cultured hepa-
      benzene parallel with creatine
                                                       toma cells), 117, 851
      phosphokinase inhibition (rat
                                                Liposomes
      quarter diaphragm), 111, 884
                                                  cholesterol-free phospholipid do-
    stimulation by insulin chemical
                                                       mains, selectivity for staining
      mediator (rat hepatocytes), 115,
                                                       by merocyanain 540 and N-ε-dan-
      375
                                                       syl-L-lysine, <u>111</u>, 768
  vesicles, and vacidin or candicidin D
                                                  containing plant phosphatidyl-
      interactions, circular dichroism
                                                       inositol, tumor cell cytotoxicity
  spectroscopy, <u>116</u>, 520
-water interface, Tonophore conforma-
                                                       induction (human, mouse), 114, 863
                                                  dicarboxylate exchange system recon-
      tional change mediation, 114, 632
                                                       stitution by incorporation of
Lipomodulin
                                                       Triton extract of mitochondrial
  dexamethasone-induced synthesis in
                                                       inner membrane from rat liver,
      histiocytic lymphoma cell line
                                                      113, 205
      U937, differentiation induction
                                                  large unilamellar
      (human), 111, 551
                                                    bacteriorhodopsin incorporation by
Lipoperoxidation
                                                       reverse phase evaporation, 111,
  initiation by
                                                       373
    chelated ferrous ion, requirement for ferric ion, \underline{111}, 777
                                                    elastic properties, effects of
                                                      cholesterol, hopanoids, and \alpha-,
    daunorubicin (mouse heart), 110,
                                                       \psi-dihydroxycarotinoids, <u>110</u>, 320
      399
                                                        permeability_induced by
```

15-05 macrocyclic polyether

2,3,7,8-tetrachlorodibenzo-p-dioxin,

```
carriers, 116, 981
                                                 Lung
  outer surface, insulin covalent binding, 117, 399
                                                   1,1-dichloroethylene selective toxic
                                                       effect: cellular injury and im-
                                                       pairment in cytochrome P-450-de-
  small unilamellar
                                                       pendent monooxygenases (mouse).
    fusion induction by Ca<sup>2+</sup> and low
    pH, freeze-fracture study, 110, 15 removal from circulation and uptake
                                                       110, 675
                                                Luteinizing hormone
                                                  release by
       into liver, increase by inclusion
                                                     ovine and chicken pituitary cells
      of lactosylcerebroside or diman-
                                                       in vitro, mammalian and chicken
      nosylglyceride (mouse), 110, 140
                                                       Tuteinizing hormone-releasing
  sonicated of dipalmitoyl phosphatidyl
                                                       hormone activities, comparison
       choline, steroid-lipid interactions, fluorescence anisotropy study, 113, 799
                                                       <u>111</u>, 1082
                                                    pituitary cells from immature rat
                                                       regulation by Cu and thiols, 112,
  uptake of microcrystalline benzo[a]-
       pyrene, synchronous fluorescence
                                                   stimulation of ornithine decarboxyl-
       study, <u>112</u>, 1069
                                                       ase activity and testosterone
B-Lipotropin
                                                       production (rat testicular
  monoclonal antibodies, antigenic
                                                       cells), 112, 496
       determinant (mouse), 116, 527
                                                  subunit & precursor, pituitary mRNA
Lipoxygenase
                                                       translation product, effect of
  arachidonic acid
                                                       estradiol treatment in vivo
     catalysis, inhibition by flavonoids
                                                       (rat), 114, 65
       (rat basophilic leukemia cells),
                                                Luteinizing hormone-releasing hormone
       116, 612
                                                       (LH-ŘH)
    metabolism, stimulation by
                                                  comparative structure-activity
       anti-inflammatory drugs (rat neu-
                                                       studies of mammalian [Arg8]LH-
       trophils from reverse passive Ar-
                                                       avian [Gln8]LH-RH, and analog
       thus reaction pleural exudates),
                                                       [Lys<sup>8</sup>]LH-RH, <u>111</u>, 1082
       112, 586
                                                  specific binding to luteal tissue
  inhibitor, S-containing polyun-
                                                       (human), 114, 750
       saturated fatty acids (soy-
                                                  synthesis, precursor peptide char-
       bean), 114, 937
                                                       acterization (human, murine, rat
  6,9,12-octadecatrienoic acid ω6-
                                                       hypothalami), <u>117</u>, 872
       oxygenation (human platelets),
                                                  synthetic analogs containing pyridyl-
      117, 593
                                                       alanines, ovulation inhibition at
  pathway
    cigarette smoke effect (rat
                                                       nanogram dosage (rat), 111, 1089
      platelets), 115, 499
                                                Lutropin, see Luteinizing hormone
                                                Lymphoblastoid cells
    and glutathione peroxidase
                                                  differential binding of interferon \alpha subtypes A, C, D, and hybrid
      coupling, 12-hydroperoxytetra-
      enoic acid formation (selenium-
                                                       molecules to receptors (human
      deficient rat platelets), 117, 183
                                                       Daudi cells), 110, 537
Lithium chloride
                                                Lymphocytes
  partial stimulation of methionine-
                                                  AY9944-induced inhibition of choles-
      enkephalin synthesis by in-
                                                       terol and DNA synthesis (human
      creasing precursor mRNA content
                                                  peripheral blood), \underline{110}, 82 internalization of Fab component from
      (rat striatum), 113, 391
Low-density lipoproteins
                                                       anti-insulin receptor antibodies,
  binding and internalization by
                                                       comparison with insulin internal-
      fibroblasts, decrease by cAMP (human), \underline{112}, 795
                                                       ization (human), 114, 230
Luciferase
                                                  phytohemmagglutin-induced prolifer-
  coupled with oxidoreductase, con-
                                                       ation, nicotinamide or
                                                       3-aminobenzamide effect (human),
      centration effect on biolumi-
                                                       <u>116</u>, 428
      nescence (Vibrio harveyi), 111,
      266
                                                  proteases, strain-related activity
Lucifer yellow CH
                                                       (murine cell surface), <u>1</u>14, 600
                                                  regulatory volume decrease, inacti-
  fluorescence labeling of glycocon-
      jugates on oxidized thymocyte
                                                       vation by N-ethylmaleimide (human
      surfaces (mouse), 112, 872
                                                       peripheral blood), 117, 154
```

T cells Lysozyme active region, homology with Schizoconcanavalin A-induced proliferation, inhibition by 5'-deoxy-5'-methylthioadenosine, phyllum commune cellulase (hen egg-white), 116, 408 mechanism (rat), <u>113</u>, 425 Lysyl oxidase growth factor, isolation and histone H1 substrate in vitro (bovine characterization (human Jurkat aorata), 115, 186⁻ Lysyl-tRNA synthetase leukemia cell line), 116, 623 Lymphoma and arginyl-tRNA synthetase complex, cell lines, tyrosine phosphorylation 12-S, hydrodynamic properties and structure (rat liver), 117, 464 (human), <u>117</u>, 843 Lymphosarcoma P1798 murine, solid and ascites glycosaminoglycans, <u>114</u>, 976 protein kinase activated by Ca/phosa2-Macroglobulin pholipid or H4 protease, -protease complex, binding and clearisolation and characterization ance (murine peritoneal macro-(murine), 116, 675 phages), <u>114</u>, 757 Lysine proteinase-induced thiol groups, modification in Ca, Zn-superoxide localization on complex surface dismutase, effect on anion af-(human), <u>111</u>, 964 finity and anion inhibition (bo-Macrophage receptors vine erythrocytes), 111, 860 -mediated mannosyl-oligosaccharide residues, role in glyceraldehydeuptake and degradation, swainsonine effect (rat lung), $\underline{116}$, 922 phosphate dehydrogenase binding to erythrocyte membrane (human), Macrophages 116, 423 alveolar, leukotriene D₄ synthesis Lysine decarboxylase increase in allergic bronchial inhibition by putrescine and spermiasthma (human), <u>111</u>, 518 dine (Escherichia coli-induced, -noninduced cells), <u>I14</u>, 882; depleted cultures, immune response to sheep erythrocytes, interleukine <u>erratum, 116,</u> 355 l, monokine, and N-acetyl-LysophosphatidyTcholine muramy1-L-alany1-D-isoglutamine thrombin-stimulated production, effects (mouse), <u>114</u>, 721 inhibition by cAMP (human platemonocyte, from 1a-25-dihydroxylets), 112, 693 vitamin D₃-induced promyelo-Lysophosphatidylethanolamine cytic leukemia-cell differenthrombin-stimulated production. tiation (human), 117, 86 inhibition by cAMP (human plateperitoneal lets), <u>112</u>, 693 arachidonic acid metabolism, re-Lsyophospholipids active oxygen and cAMP producacylation by arachidonic acid, relation (rat), <u>114</u>, 549 tive rates with various moleionophore A32187-stimulated procules (rat pancreatic acini), duction of prostaglandins and 112, 502 cAMP, inhibition by trifluopera-Lysosomal enzymes zine and verapamil (rat), 114, 248 binding by brain protein isolated by prostaglandins E2 and I2 bindphosphomannan-Sepharose chromatoing to different receptors, assay graph (Macaca radiata), 112, 398 with Millipore filter system Lysosomal protease (rat), 114, 155 cathepsin D, translocation across zymosan-induced lysosomal hexosmicrosomal membranes, signal aminidase secretion, mannoserecognition particle requirement glycoprotein receptor role (canine, porcine), <u>115</u>, 275 (mouse), 113, 102 Lysosomes selective phagocytosis of senescent hepatic, injected and in vivo synand in vitro aged erythrocytes, thesized dolichol distribution receptor identification (rat liver), 115, 551 (rat), 1<u>15</u>, 917 intra pH, relation to cystine accumu-Magnesium ion lation (human normal, cys--actin, polymerization character-

istics, <u>116</u>, 478

tinotic fibroblasts), 116, 154

```
binding to elastase-inactivated
                                                     effect (rat), 113, 883
      carbamoyl-phosphate synthetase
                                               Manganese(II) dioxygenase
      (ammonia) (rat liver), 117, 238
                                                 extradiol-cleaving, penicillamine-
                                                     Mg(II) complex model, 115, 618
  effect on high-affinity agonist
                                               Manganese ion
      binding sites of muscarinic re-
                                                 in photosystem II of inside-out thyla-
      ceptor subtypes (rat cerebellum,
                                                     koid vesicles, removal by EDTA
      cerebral cortex, heart), 116, 284
                                                      causing oxygen evolution inhibi-
  requirement for NADPH oxidase
                                                 tion (pea chloroplasts), <u>110</u>, 545 uptake by crustacean nerve fiber in
      activity in polymorphonuclear
      leukocytes (guinea pig), <u>115</u>, 261
                                                      resting state and during potas-
Magnetic circular dichroism
                                                      sium depolarization, radioisotope
  horseradish peroxidase compound I,
                                                      and NMR studies (Collinectes sa-
      temperature dependence, <u>112</u>, 515
                                                     pidus), 111, 560
Malate
  conversion from fumarate by fumarate
                                               Manganese ion (II)
      hydratase, absolute stereochemis-
                                                 -penicillamine complex, extradiol-
cleaving manganese(II)
      try monitored by neutron diffrac-
      tion, 115, 1048
                                                      dioxygenase model, <u>115</u>, 618
Malate dehydrogenase
                                               Mannose-glycoprotein receptors
  adrenalectomy and dexamethasone
                                                 in initiation of zymosan-induced
      effects in vivo (rat testes),
                                                      secretion of lysosomal hexosami-
      115, 606
                                                     nidase by macrophages (mouse),
Malate dehydrogenase (oxaloacetate-
                                                      113, 192
      decarboxylating) (NADP*)
                                               α-D-Mannosidase
  adrenalectomy and dexamethasone
                                                 binding to protein isolated from
      effects in vivo (rat testes),
                                                     monkey brain by phosphomannan-
      115, 606
                                                      Sepharose chromatography (Macaca
  induction by fructose and insulin in
                                                      radiata), <u>112</u>, 398
      diabetic liver by translatable
                                                 and bovine liver phosphomannosyl
      mRNA increase (rat), 112, 176
                                                     receptors, interactions (Dictyo-
4-(N-Maleimido) benzyltrimethylammonium
                                                      stelium discoideum), 116, 541
                                                 lysosomal, synthesis in normal and mannosidosis fibroblasts (human),
  specific for nicotinic acetylcholine
      receptor, interaction with axonal
      membrane (lobster), 111, 61
                                                      115, 1083
                                               Mannos idos is
L-Malic acid
  angiotensin II analogs, molecular
                                                 fibroblasts, lysosomal \alpha-D-mannosidase
      weight and amino acid sequence,
                                                      synthesis (human), 115, 1083
       fast atom bombardment mass spec-
                                               Mannosyl-oligosaccharide
                                                 macrophage receptor-mediated uptake
       tra, 115, 653
Malic enzyme, see Malate dehydrogenase
                                                      and degradation, swainsonine
                                                      effect (rat lung), 116, 922
       (oxaloacetate-decarboxylating)
                                               Maple syrup urine disease
       (NADP<sup>+</sup>)
Malonate
                                                 metabolites, myelin degradation
                                                      initiation (rat brain), 114, 440
  external, exchange with internal
      malonate or phosphate, mitochon-
                                               Mass spectrometry
       drial transport system reconsti-
                                                 derivatives of glycolipid antigen
       tution in liposomes, 113, 205
                                                      from human pancreatic carcinoma,
Malondialdehyde
                                                      110, 383
  production by 2,3,7,8-tetrachlorodi-
                                                 fast atom bombardment, <u>see</u> Fast atom
       benzo-p-dioxin-induced lipo-
                                                     bombardment mass spectrometry
       peroxidation, detection by
                                                 127I-plasma desorption, quasi-
       thiobarbituric (rat hepatic
                                                     molecular ions from neurotoxin
       microsomes), <u>111</u>, 854
                                                      (cobra venom), <u>110</u>, 519
Mammary gland
                                               Mast cells
   differentiation in vitro, inhibition
       by 5-azacytidine, mechanism
       (mouse), <u>111</u>, 150
Mammary tumors
                                                      lease (rat), <u>111</u>, 581
   induced by 7,12-dimethylbenz[a]-
       anthracene, superoxide dismutase
```

isozymes and activities, estrogen

effect on respiratory electron ing to calmodulin, kinetics transport (Rhodopseudomonas cap-(hornet, wasp venoms), 114, 50 sulata), 113, 155 Measles virus inhibition of endogenous oxygen persistent infection, stimulation of consumption (Rhodopseudomonas fatty acid incorporation into neutral lipid fraction (BGM cells), $\underline{112}$, 29 capsulata), 113, 155 Membranes Mefenamic acid adrenal medullary, exocytosis-like acceleration of proton exchange interaction with chromaffin between octanol and water, role granules, protein phosphorylation in anti-inflammatory activity, role (bovine), <u>110</u>, 55 113, 745 Megamodulins axonal crustacean, interaction with 4-(N-maleimido) benzyltrimethylisolated from rabbit brain, bakers' yeast, wheat germ, and Escheriammonium specific for nicotinic chia coli, mammalian and yeast acetylcholine receptor (lobster), phosphoprotein phosphatase stim-111, 61 ulation, 114, 403 bacteriorhodopsin-deficient, resolu-Melanocyte-stimulating hormone (MSH), tion of halorhodopsin chrosee Melanotropin mophoric polypeptides (Halobac-Melanoma terium halobium), 112, 332 differentiation induction by polybasement, see Basement membranes amine antimetabolites (murine brain Cloudman S91), <u>113</u>, 18 α-bungarotoxin binding inhibition laminin receptor isolation (murine by cholin from calf brain extract BL6), 111, 804 (chicken), 111, 82 β-endorphin binding sites, comparplasma membrane fragment isolation by various methods, comparative ative kinetics (rabbit), 111, 1096 study (mouse), 113, 462 opiate δ -receptor affinity to Y3-Melanotropin synthetic peptide deltakephalin elimination by antisera, inhibition (rat), <u>111</u>, 390 of corticotropin-induced increase brush-border in adrenal steroidogenesis (norglucose transporter solubilization motensive and spontaneously by Triton X-100, stimulation by hypertensive rats), 110, 357 Na⁺ (porcine kidney), 112, 444 Melezitose γ-qlutamyltransferase conversion active hydrogen content, fast atom of precursor to subunit forms bombardment mass spectrometry (rat kidney), <u>114</u>, 889 following H-D exchange, 112, 126 protein binding Clostridium Melibiose active hydrogen content, fast atom perfringens enterotoxin, isolation and identification (rabbit), bombardment mass spectrometry <u>112</u>, 1099 following H-D exchange, 112, 126 Melphalan collagen, <u>see</u> Collagen membranes DNA replication partial reduction in Descemet's, endothelial cell and type melanoma cells, detection of rep-IV collagen identification (bolication intermediates (human). vine), <u>116</u>, 619 110, 530 epidermal, sphingomyelin binding site constituent for tumor promoting resistance, membrane sulfhydryl group phorbol esters, indole alkaloids role (murine L1210 leukemia and polyacetates (mouse), 112, 709 cells), 117, 670 erythrocyte, see Erythrocyte membranes Membrane potential Ca²⁺-dependent, induction by dibutyryl cAMP (murine pancreatic islet B cells), <u>112</u>, 614 collapsed by Ca²⁺ and phosphate, erythroleukemia cells, tyrosine phosphorylation stimulated by dimethyl sulfoxide (mouse), 112, 413 fetal, Ca and phosphate fluxes restoration by ADP or ATP with (rat hepatic mitochon-(guinea pig), <u>110</u>, 438 gastric mucosa, acid secretory dria), <u>111</u>, 792

photogenerated, measured by tetra-

bution

phenylphosphonium ion redistri-

mechanism suppression by allyl-

isothiocyanate (porcine, bull-

frog), 112, 464

```
hepatic
  epidermal growth factor receptor
proteolysis by endogenous Ca<sup>2+</sup>-
     activated neutral protease (rat),
     113, 255
  insulin-induced release of low-
    molecular-weight stimulator and
     inhibitor of cytosolic acetyl-CoA
     carboxylase (rat), <u>110</u>, 789
  sinusoidal, oleate binding in
     vitro, albumin and β-lactoglobu-
     lin effects (rat), 112, 88
ileal brush border, [^{125}I] intrinsic factor binding (rat), \underline{115}, 238
intestinal microvilli, plant lectin
    binding changes during postnatal
    development (rat), \underline{113}, 400;
     <u>erratum, 116</u>, 355
intracytoplasmic, diphenylhexatriene
    fluorescence polarization, dif-
     ferentiation inducer effects (mu-
     rine Friend leukemia cells), 117,
    294
L cell, interferon B-induced fluid-
     ity increase, fluorescence assay
     (mouse), 110, 88
lipid bilayers
  acetylcholine receptor exposure
     (Torpedo californica), 115, 1075
  containing auxin-binding protein
  from maize leaves, generation of auxin/ATP-dependent electrochemical response, 110, 300 oriented, angle resolved fluores-
     cence depolarization, 116, 462
lipid composition in hepatocytes,
     Kupffer cells, and endothelial cells (rat), 113, 845
mammary, binding of ovine prolactin,
     pH-dependent dissociation of com-
     plex (rabbit), 111, 224
melanoma cells, fragment isolation
     from culture, comparative study
     (mouse), <u>113</u>, 462
microsomal, lysosomal protease
    cathepsin D translocation, signal
     recognition particle requirement
     (canine, porcine), <u>115</u>, 275
multilamellar planar containing
    pancreatic islet extracts, Ca<sup>2+</sup>
     ionophoretic activity increase by
    extracts from islet-activating
    protein-pretreated islets, 112,
    684
myoepithelial from mammary tissue,
    oxytocin binding unaffected by
```

estrogenic compounds (rat), 112,

synexin-like protein from adrenal

negatively charged, Ca²⁺-induced

aggregation, enhancement by

```
medullary or liver (bovine), 112,
  pancreatic, somatostatin binding,
      regulation by Ca and Na ions
       (guinea pig), 115, 827
  pituitary, gonadotropin-releasing
      hormone receptor photoaffinity
       labeling with hormone antagonist
       (rat), 110, 116
  plasma, see Plasma membranes
  pulmonary, B-adrenergic receptor
      heterogeneity, proteinase inhibi-
      tor effects (hamster, rat), 110,
      504
  purple, see Purple membranes
  renal basal-lateral vesicles, Na<sup>2+</sup>-
      dependent glutathione transport
      (rat), 112, 55
  retinal cell, photoreceptor phospho-
      lipid reduced phosphorylation in
      visual norpA mutants (Drosophila
      melanogaster), 111, 567
  Rous sarcoma virus-transformed rat
      cells, absence of epidermal
      growth factor-dependent protein
      phosphorylation, 113, 678
  skeletal muscle, purification moni-
      toring by tetrodotoxin, ouabain,
      and insulin receptor determin-
      ation (rabbit), 112, 521
  synaptic, <u>see</u> Synaptic membranes
  synaptosomal, see Synaptosomal mem-
      branes
  transverse tubule, irradiation
      inactivation, nitrendi pine re-
      ceptor molecular size determina-
      tion (rabbit skeletal muscle),
      <u>111</u>, 878
  uv-irradiated Escherichia coli, fatty
      acid composition effect on liquid
      holding recovery, 110, 609
  ventral prostatic, in vitro fluidiza-
tion by aliphatic alcohols
      causing prolactin receptor
      activation (rat), <u>113</u>, 220
  ventricular, adenylate cyclase-
      coupled adenosine receptor detec-
      tion (guinea pig heart), <u>110</u>, 208
  wheat protoplasts, Ca transport not
      affected by phytochrome, <u>113</u>, 171
Mercaptan
  reaction with highly strained ether
      ring in neocarzinostatin chromo-
      phore, NMR, <u>113</u>, 538
8-Mercaptoethanol
  effect on ß-adrenergic receptor
      structures (mammalian), 116, 777
в-Mercaptoethylamine, see Cysteamine
Mercaptomethyl lactams
  conformationally restricted inhibi-
      tion of angiotensin converting
```

1983 Cumulative Subject Index

```
enzyme, mechanism, 111, 166
Mercuric chloride
  stimulation of phospholipid hydro-
      lysis and cell death, Hg<sup>2</sup>
      acting as Ca-mimetic agent (murine fibroblasts), 110, 758
S-Mercuric-N-dansylcysteine
  acetylcholinesterase modification,
      fluorescence study (Torpedo cali-
      fornica), 112, 941
Mercuric reductase
  and NADPH, reaction kinetics,
      stopped-flow study (Pseudomonas
      aeruginosa), <u>117</u>, 23T
Merocyanine 540
  fluorescent staining of leukemic
       lymphocytes, role of cholesterol-
      free phospholipid domains in mem-
      branes (human, mouse), 111, 768
Meromyosin
  heavy, active site binding to
      nucleotide (rabbit), 115, 312
Metachromatic leukodystrophy
  arylsulfatase A synthesis as cross-
      reactive protein with altered
      properties (human fibroblasts),
      112, 198
Metal ions, see also specific metal ions
  content in lectins, effect on binding
      activity, 115, 1069
Metallothionein
  Cd detoxication after intraperitoneal
       injection (rainbow trout), 110,
  Hg- and Cu-containing, spectroscopic
characterization (rat kidney),
      <u>1</u>15, 167
  In effect on Stokes radius (rat
       liver), 114, 998
Methane
  major constituent of biogas produced
      by castor cake anaerobic diges-
      tion by mixed culture from cow
      dung, 110, 32
Methanobacterium thermoautotrophicum
  cyclic-2,3-diphospho-D-glycerate
       levels, inorganic phosphate role,
      116, 1125
Methapyrilene
  intoxication, effect on hexokinase
       and glucokinase activity in
       parenchymal and nonparenchymal
       cells (rat liver), <u>115</u>, 1090
Methemoglobin
  -ascorbic acid interaction, produc-
       tion of activated oxygen species,
       mechanism, 1<u>11</u>, 980
  complexes and subunits, Soret magne-
       tic circular dichroism spectra,
       role in ferric heme spin states
       (human), <u>114</u>, 318
```

```
Methemoglobin reductase
  solubilization during reticulocyte
       maturation, ATP-dependent prote-
      olysis role (rabbit), 116, 357
Methimazole
  metabolite inhibiting microsomal
       N-hydroxylation of 2-amino-6-
       nitrotoluene (rat liver), 113, 433
Methionine
  dependence in tumor cells (human),
       117, 429
  exogenous, effect on mRNA formation
       in 7-S storage protein β-subunit
       (cultured soybean cotyledons),
       117, 658
  <sup>35</sup>S-labeled
    short-lived proteins, degradation,
       stimulation by amino acids (rat
    hepatocytes), <u>117</u>, 509 sulfur incorporation into biotin
  (Escherichia coli), 110, 243
synthesis from 5'-methylthioadenosine
and 5'-methylthioinosine (human,
       murine lymphoblasts, human tissue
       extracts), <u>112</u>, 391
Methionine-enkephalin (Met-enkephalin)
  -containing peptide BAM22P, substrate
       for kallikreins from equine urine
       and porcine pancreas, kinetic
       constants, 112, 366
  synthesis in striatum, stimulation by
       haloperidol or lithium chloride
       injections (rat), 113, 391
m-Methoxybenzamide
  chondrocyte differentiation enhance-
       ment in limb bud cell culture
       (chicken), 111, 750
2-Methoxy-2,4-dipheny1-3(2H)-furanone
  -dipeptide chromophoric reaction,
       chirooptical properties, 114, 433
8-Methoxypsoralen
  and uv irradiation, differential
       inhibition of DNA, RNA, and pro-
       tein synthesis (L1210 cells).
       112, 965
3-Methylcholanthrene
  induction of
     aryl hydrocarbon hydroxylase (rat
       fetal hepatic microsomes), 113, 59
     cytochrome P-450, high spin form
       isolation and characterization
    (rat liver), 111, 504
p-nitrophenol UDPglucuronyltrans-
       ferase activity, comparison with
       ethanol induction (rabbit hepatic microsomes), \underline{111}, 219
Methylcyclohexenone
  double bond reduction by microorgan-
```

isms (Clostridium sp., Strepto-

myces strains), 110, 908

absence in satellite DNA from

5-Methylcytosine

```
sperm (bovine, murine), 113, 695
                                                 effect on deoxynucleoside triphos-
[3H]cisMethyldioxolane
                                                     phate pools (Chinese hamster V79
  regulators, effect on high-affinity agonist binding sites (rat cere-
                                                     cells), 114, 458
                                               Methylnitrosourea
bellum, cerbral cortex, heart), \frac{116}{8-\gamma-\text{Methylene-ATP}}
                                                 alkylation of DNA and poly(dG-dC)-
                                                     ·poly(dG-dC) in B and Z forms,
                                                     116, 682
  inhibition of exocytosis-like inter-
                                               0-Methylsterigmatocystin
      action between adrenal me-
                                                 conversion from sterigmatocystin in
      dullary plasma membranes and
                                                     cell-free system (Aspergillus
      chromaffin granules, role of pro-
                                                     parasiticus mutant), 116, 1114
                                               5-Methyltetrahydrofolate
      tein phosphorylation inhibition
      (bovine), 110, 55
                                                 intestinal transport, cAMP effect
4-Methyleneglutamine
                                                     (rat jejunum), 115, 756
                                               5'-Methylthioadenosine
  synthesis from 4-methyleneglutamic
      acid and ammonia, catalysis by
                                                 metabolism to methionine, effect on
      amide synthetase (germinating
                                                     cell proliferation (human, murine
      peanuts), <u>111</u>, 484
                                                     lymphoblasts), 112, 391
4-Methyleneglutamine synthetase
                                               1-Methy1-2-thioimidazole
                                                 metabolism, iodide peroxidase and
  amide synthetase, purification from
      germinating peanuts, 111, 484
                                                     dimethylaniline monooxygenase
N^5-Methyl-N^5-formyl-2,5,6-tri-amino-
                                                     roles (porcine thyroid), 116, 449
      4-hydroxypyrimidine
                                               5'-Methylthioinosine
  carcinogen-DNA adduct, identification
                                                 metabolism to methionine, effect on
      (rat liver), <u>110</u>, 625
                                                     cell proliferation (human, murine
4-0-Methyl-D-glucuronic acid
                                                     lymphoblasts), <u>112</u>, 391
  specific binding by soybean aggluti-
                                               Methyltransferase I
      nin, <u>1</u>11, 798
                                                 inactivation by GTP, effect on
4-0-Methyl-D-glucurono-L-rhamnan
                                                     S-adenosyl-L-methionine-mediated
  produced by Rhizobium japonicum
                                                     methylation of phosphatidyl-
      strains, specific binding by soy-
                                                     ethanolamine (rat hepatic plasma
                                                     membrane), <u>114</u>, 425
      bean agglutinin, 111, 798
Y-Methylglutamic acid
                                               Methyltransferase II
  diastereoisomeric in synthetic penta-
                                                 stimulation by GTP, effect on
      peptides, microsomal vitamin
                                                     S-adenosyl-L-methionine-mediated
      K-dependent carboxylation sub-
                                                     methylation of phosphatidyl-
      strates (rat), 113, 454
                                                     ethanolamine (rat hepatic plasma
Methylglyoxal bis(guanyThydrazone)
                                                     membrane), 114, 425
  polyamine biosynthesis inhibition
                                               4-Methylumbelliferyl-α-D-N-acetyl-
      causing melanoma cell differen-
                                                     neuraminic acid
      tiation (murine Cloudman S91).
                                                 neuramindases, genetically different
      113, 18
                                                     forms in sialidosis, galactosi-
7-Methylguanine
                                                     alidosis, and sialolipidosis (hu-
  -tryptophan systems, stacking inter-
                                                     man leukocytes), 117, 470
      actions, mRNA model, 115, 849
3-Methylindole
                                              0-(4-Methylumbelliferyl)-glycosides
                                                 fluorescence, effects of several
  free radical generation in NADPH-
      dependent microsomal system, ESP
                                                     solvents and amino acids, 110, 926
                                               Metyparone
      (caprine lung), 114, 168
Methylisobutylxanthine
                                                 inhibition of aflatoxin B1 uptake
                                                     and binding by isolated hepato-
  inhibition of tumor promoter-induced
      interleukin 2 production by thy-
                                                     cytes (rat), 110, 668
      mocytes (mouse), 114, 93
                                               Mevalonate
Methyl methane sulfonate
                                                 sole carbon source for soil bacteria,
  -damaged DNA, DNA synthesis and
                                                     isoprenoid synthesis, <u>110</u>, 187
                                              Mg-ATP
      thymidylate synthase inhibition
                                                 dissociation constant at millimolar ATP Levels, <sup>31</sup>P NMR and optical
      by 3-aminobenzamide, ß-lapachone,
      and aphidicolin (human), 117, 30
<u>N-Methyl-N'-nitro-N-nitrosoguanidine</u>
                                                     absorbance spectroscopy (per-
  DNA break induction, detection by
                                                     fused, ischemic heart muscle),
                                                     117, 210
      nick translation (human fibro-
```

blasts), 111, 383

induction of erythrocyte membrane

```
vitamin K-dependent carboxylation.
      shape changes, phosphorylation
      and ATP binding roles (human).
                                                     diastereoisomeric y-methylqlu-
      112, 384
                                                     tamic acid-containing pentapep-
  phenol 2-monooxygenase regulation, pH
                                                     tide substrates (rat), 113, 454
      effect (rat liver microsomes),
                                                 oxidation of hydroxyl radical
      116, 966
                                                     scavenging agents and ethanol,
                                                     EDTA and Fe effects (rat liver),
Micrococcal nuclease
                                                     116, 765
  digestion of chromatin DNA, trans-
                                                 pulmonary
      cription effect (HeLa cell
                                                   1,1-dichloroethylene-induced
      nuclei), 116, 312
a1-Microglobulin
                                                     reduction of cytochrome P-450
                                                     level and related monooxygenase
  isolation and characterization (rat
                                                     activities (mouse), 110, 675
      urine), 116, 180
                                                   3-methylindole-induced free radical
  neutral microprotein isolation and
                                                     generation, EPR (caprine), 114,
      characterization (guinea pig, hu-
      man, rabbit), 117, 202
                                                 renal
Microsomal enzymes
                                                   25-hydroxyvitamin D<sub>3</sub> conversion
  inhibitors, effect on aflatoxin
                                                     to unidentified metabolite and
      B1-induced cytotoxicity and RNA
                                                     25,26-dihydroxyvitamin D<sub>3</sub>
      synthesis inhibition (rat hepato-
                                                     (rat), 110, 766
      cytes), 115, 15
                                                   NaHCO3 incorporation inhibition
Microsomes
                                                     in vitamin D deficiency (rat),
  benzo[a]pyrene hydroxylase character-
      ization (Aspergillus ochraceus),
113, 497
                                                     113, 294
                                               Microtubules
  cerebral cortex, keratan sulfate-like
                                                 assembly.
                                                   from active subunits, inhibition by denaturated tubulin (porcine
      glycoconjugate binding (rat),
      111, 28
  cytochrome P-450 immunochemical
                                                      brain), 1<u>10</u>, 463
                                                   by incubation with GTP, disassembly
      specificity (tulip bulbs), 115, 46
                                                      by calmodulin-dependent protein
  differentiation induction by retinol,
                                                      kinase (rat brain), 110, 287
      mechanism (embryonal carcinoma
  cells), 114, 593
epidermal, aryl hydrocarbon hydroxy-
                                               Microvitellogenin
                                                 purification and properties, juvenile
                                                      hormone role in appearance and
      lase metabolizing benzo-
                                                      uptake (Manduca sexta), 117, 643
      [<u>a]</u>pyrene, inhibition by ellagic
acid (rat), <u>114</u>, 388
                                               Milk
                                                 colony stimulating factor isolation
  hepatic
                                                      (human), 114, 797
    2-amino-6-nitrotoluene N-hydroxyl-
                                               Minichromosomes
      ation, inhibition by methimazole
                                                 uv-irradiated, substrates for DNA
      metabolite (rat), 113, 433
                                                      repair endonucleases (simian
    bilirubin diglucuronide formation,
                                                      virus 40), <u>113</u>, 309
      intact tetrapyrrole affinity and
                                               Misonidazole
      thin layer chromatography (rat),
                                                 reduced to hydroxylamine state,
      117, 406
                                                      reaction with glutathione to form
    electron transport proteins, allox-
                                                      stable conjugates, 112, 1013
      an reduction (porcine), 114, 578
                                               Mitochondria
    enzyme-induced aziridine formation
                                                 adrenal cortex, correlation between
      from 2-chloroethylaminobenzo-
                                                     NADPH-dependent lipid peroxida-
      quinone derivatives (rat), 110,
                                                     tion and cytochrome P-450 degra-
      220
                                                     dation (bovine), 110, 559
    injected and in vivo synthesized
                                                 ATP-stimulated Ca^{2+} accumulation
      dolichol distribution (rat), 115,
                                                      (adrenal medulla), 1<u>17</u>, 245
    oxygen consumption stimulation by
                                                 -bindable and nonbindable hexo-
                                                     kinase, hydrophobicity difference
      organic hydroperoxides, catalysis
      by cytochrome P-450 (rat), 110,
                                                      (rat brain), 115, 1101
      646
                                                 cardiac
    phenacetin mutagenicity increase by
                                                   adenosine release, role of adenine nucleotide translocase and
      deacetylation, activity in
```

ATP/ADP ratio (rat), 113, 990

hamster and rat, 110, 746

Molibdenum cofactor

calmodulin-binding protein from

```
matrix, isolation and properties
                                                    oxidation product from nitrate
       (bovine), 113, 633
                                                         reductase (Escherichia coli) and
  hepatic
                                                         xanthine oxidase (bovine milk),
    5-aminolaevulinate synthase trans-
                                                         identification as thieno[3,2-g]-
       location, inhibition by hemin
                                                         pterine derivative, 111, 537
    (chicken), <u>115</u>, 700
Ca<sup>2+</sup> transport, chronic ethanol
                                                  Molybdate
                                                    effect on
       feeding and acetaldehyde metabo-
                                                       estrogen receptor activation
    lism effects (rat), 117, 169 deenergized by Ca<sup>2+</sup> and phos-
                                                         mechanisms (rabbit, rat uterine
                                                         tissue), <u>115</u>, 685
       phate, membrane potential
                                                       progesterone receptors (chick
      restoration by ADP or ATP with {\rm Mg}^{2+} (rat), \underline{111}, 792
                                                         oviduct), <u>114</u>, 479
                                                  Monamine oxidase, see Amine oxidase
    dicarboxylate transport system,
                                                         (flavin-containing)
      reconstitution by incorporation
                                                  Monobutyryl cAMP
      of inner membrane Triton extract
                                                     inhibition of Na<sup>+</sup>,K<sup>+</sup>-ATPase
       into liposomes (rat), 113, 205
                                                         (hamster sperm homogenate), 112, 132; erratum, 114, 431
    incubated with glutamate dehydrog-
      enase precursor synthesized in
                                                  Monoclonal antibodies
      cell-free system, enzyme
                                                    A2B5, binding to gangliosides (boyine
      maturation (rat), 110, 499
                                                         brain, human erythrocytes), 116,
    protein release in vitro, stimula-
      tion by cytosolic proteins
                                                    to \Delta^6-acyl-CoA desaturase: \Delta^6-, and \Delta^5-desaturase
      synthesized in cell-free system (rat), <u>113</u>, 199
                                                         effects (rat hepatic microsomes),
    uncoupling by ionophorous fraction
      from human uremic plasma and nor-
                                                    to adenylate cyclase from Neurospora
      mal urine (rat), 111, 326
                                                         crassa, inactivation of lower
  pre-5-aminolaevulinate synthase
                                                         eukaryotic organism adenylate
      transfer, inhibition by hemin
                                                         cyclase, <u>113</u>, 778
       (chick embryo liver), 117, 344
                                                    -bleomycin conjugate, production
  protein phosphorylation in vitro,
                                                         using dextran T-40, antigen-tar-
       inhibition by dichloroacetate and
                                                         geting cytotoxicity (murine anti-HLA IgG<sub>1</sub>), \underline{115}, \underline{1009}
       AMP (rat brain, heart, liver),
      111, 1054
                                                    to calf uterus cytoplasmic estrogen
  rRNA genes, resemblance to interferon-
                                                         receptor, binding to nuclear re-
       induction-specific sequence cDNA
                                                    ceptor in murine uterus, <u>114</u>, 107 to drug-resistant tumor cell plasma
       clones, 114, 670
  yeast
                                                         membrane, 230-kilodalton protein
    inner membrane hydrophobic protein
                                                         identification (mouse), 114, 969
       30K, comparison with cytochrome
                                                    with high affinity for 1,25-dihydroxy-
       <u>b-c1</u> complex, <u>110</u>, 945
                                                         cholecalciferol, vitamin D3
    tribenzylphosphate inhibitory
                                                         metabolite identification, 112,
       effects on phosphate active
                                                         431
       transport and oligomycin-sensi-
                                                    to human acetylcholine receptor,
       tive ATP synthesis, mechanism
      (Saccharomyces cerevisiae), 113, 751
                                                         cross-reactivity with murine ace-
                                                         tylcholine receptor, 113
                                                     IB9 to sialosyla2→6galactosyl resi-
Mitomycin C
                                                         due, detection of human
  CHO cell sensitivity, increase after
                                                         cancer-associated gangliosides,
       pretreatment with dibutyryl cAMP,
                                                         113, 791
       decrease after post-treatment,
                                                    to N^6 - (\Delta^2 - isopentenyl) adenosine
       111, 247
                                                         and N<sup>6</sup>-(4-hydroxy-3-methyl-but-
  effect on deoxynucleoside triphos-
                                                         2-enyl)adenosine in tRNA, charac-
       phate pools (Chinese hamster V79
                                                         terization (bovine, murine), 114,
  cells), 114, 458
-modified DNA: bleomycin and DNase 1
                                                     to leucine-enkephalin, production and
       nucleotide sequence cleavage,
                                                         characterization (murine hybri-
       117, 916
                                                         doma), 113, 757
Mossbauer spectroscopy
                                                     to β-lipotropin, antigenic determi-
  Fe-bleomycin complexes, 110, 827
```

```
nant (mouse), 116, 527
  myosin light-chain kinase native form
      identification (chicken gizzard),
      115, 855
  to quail skeletal muscle myosin sub-
      units, prepation and charac-
       terization, 113, 407
  -specific cytochrome P-450 isozymes,
       detection and purification by im-
      munoadsorption (murine hybridoma
       cells), 116, 859
Monocytes
  macrophages, from 1α,25-dihydroxy-
       vitamin D3-induced promyelocy-
       tic leukemia-cell differentia-
       tion (human), 117, 86
Monokines
  resident macrophage, effect on sheep
       erythrocyte immune response in
      macrophage-depleted cultures
       (mice), 114, 721
Mononucleotides
  active hydrogen content, fast atom
       bombardment mass spectrometry af-
       ter H-D exchange, 112, 126
Monooxygenase
  carbon monoxide-sensitive, oxidation
       of di- and trimethylamine in
       cell-free extracts (Candida
  boidinii microsomes), 113, 900 cytochrome P-450 dependent fatty acid, barbiturate-induced
       barbiturate structure and inducer
         activity (Bacillus megaterium),
         116, 843
       characterization (Bacillus megaterium), 116, 843
    neonatal phenobarbital adminis-
       tration effect (adult rat liver),
       114, 1132
Mucus
  gastric, hydrogen ion diffusion,
       mucus glycoprotein, serum al-
       bumin, and IgA roles (canine),
       115, 1053
Multiplication stimulating activity effect on tRNA ys modifications
       (BALB/C 3T3 cells), 115, 598
Murine erythroleukemia cells
  membrane tyrosine phosphorylation,
       stimulation by dimethyl sul-
       foxide, 112, 413
Muscarinic receptors, see Acetylcholine
      receptors, muscarinic
  electrical stimulation-induced fast
```

to slow fiber transformation,

correlation between myosin iso-

zymes, light chain, and corre-

fibre type IIM, specific protein

sponding mRNAs (rabbit), 113, 325

```
identification (feline), 113, 519
Muscular dystrophy
  collagen type III increased propor-
    tion in skeletal muscle (chicken),
    111, 933
Mutagenicity
  activation mechanism in Ames' tester
      strains, 116, 141
  2-hydroxyamino-6-methyldipyrido-
      [1,2-a:3',2'-d]imidazole, effect
       in Salmonella typhimurium
      TA98/1,8-DNP6-deficient strain,
      116, 141
  of phenacetin, deacetylation
      effect (hamster hepatic
      microsomes), 110, 746
  pyrolysis-produced heterocyclic
      amines, ultimate forms (Salmo-
      nella typhimurium TA98/1.8-
      DNP_6), 114, 626
Mutants
  compactin-resistant, insulin receptor
      level alteration and endocytosis
      activity (Chinese hamster), 117,
  drug resistant induction by 5-fluoro-
      deoxyuridine in presence of
      deoxycytidine (Chinese ham-
      ster), <u>110</u>, 573
  hemoglobin Stanleyville II, fiber
      formation inhibition in sickle
      cells (human), <u>111</u>, 8
  induction by DNA crosslinks after
      uv-irradiation (Deinococcus ra-
      diodurans), 112, 458
  learning-defective dunce, larval brain containing one 3':5'-cyclic-
      nucleotide phosphodiesterase iso-
      zyme (Drosophila melanogaster),
      111, 6<del>5</del>2
  proton-translocating ATPase defective
      in \delta subunit of F_1 and \underline{b}
      subunit of F<sub>0</sub>, genetic
      complementation and recom-
      bination tests (Escherichia coli), 111, 143
 RNA processing, isolation, effect on
      RNase P (Escherichia coli), 114,
      690
  tfm (testicular feminization).
      absence of androgen receptors
      with high affinity to dihydrotes-
      tosterone in neonatal brain
  (rat), <u>111</u>, 717
β-thalassemic, DNA nucleotide
      sequence changes (Algerian
      patients), <u>113</u>, 269
 twitcher mouse with galactosyl-
      ceramidase deficiency, abnormal
      accumulation of galactosylcer-
```

amide in kidney, <u>110</u>, 940

visual in norpA gene, reduced phos-

phorylation of photoreceptor

Myosin light-chain kinase

Subject Index

Ca2+-dependent, conversion to Ca²⁺-independent form by phospholipids in retinular cell membrane (Drosophila melanogaslimited proteolysis with α-chymotrypsin (rabbit skeletal ter), $111, \overline{567}$ muscle), 110, 701 Mycobacterium fortuitum -calmodulin complex, dissociation with mastorpans, kinetics, 114, 50 linear lipopeptide fortuitin, NMR, 113, 121 native form, identification by mono-Mycoplasma clonal antibodies (chicken hybridoma contamination, effect on gizzard), 115, 855 reverse transcriptase activity Myristoyl coenzyme A estimation (mouse), 112, 265 inhibition of DNA polymerases α and Myelin γ (sea urchin eggs), 110, 902 deterioration, induction by superoxide radical <u>in vitro</u> (human brain), 117, 14T N proteolipids, synthesis in cell-free brain mRNA-dependent system NAD (rat), <u>110</u>, 432 Myelin basic protein dose-dependent effect on F₁-ATPase activity, mechanism (bovine degradation by cathepsin B, suppression by cerebrocystatin (rat heart), <u>113</u>, 273 brain), <u>112</u>, 1000 levels during ischemic injury, effect Myelin proteins of nicotinic acid (murine renal cells), <u>113</u>, 996 degradation initiated by maple syrup metabolism, role of trigonelline urine disease metabolites (rat brain), <u>114</u>, 440 demethylating enzyme (porcine Myeloperoxidase liver), 113, 569 isozymes, distribution in azurophilic NADH:Nitrate reductase, <u>see</u> Nitrate reductase (NADPH) granule neutrophil subpopulations (human), $\underline{114}$, 296 NADH semidehydroascorbate reductase Myoblasts -calmodulin, interactions in differentiation in vitro, alteration clathrin-coated vesicles (rat in purine nucleotide metabolism liver), 115, 952 (rat), 116, 507 NADP+ H_2O_2 -mediated conversion from Myocytes cardiac NADPH, catalysis by hemeundecapeptide from cytochrome c, elemental content in nuclei, cytoplasm, and mitochondria-enriched 113, 710 NADPH cytoplasm in normal and Snell dwarf mice, 114, 234 H_2O_2 -mediated oxidation to NADP⁺, catalysis by hemenimodipine binding site density in undecapeptide from cytochrome c, isolated cells, subcellular frac-113, 710 tions (rat), <u>113</u>, 185 and mercuric reductase, reaction Myosin kinetics stopped-flow study aortic, phosphorylation and inter-(Pseudomonas a<u>eruginosa</u>), <u>117</u>, 231 action with actin, modulation by NADPH-cytochrome reductase spontaneously active phosphatase cytoplasmic, in 2-octaprenylphenol (bovine), <u>111</u>, 906 hydroxylation to ubiquinone 8 heavy chain, embryonic heterogenity, (Escherichia coli), 111, 830 peptide mapping with sodium stearoyl-CoA desaturation (Tetrahylauryl sulphate (rat skeletal mena microsomes), 115, 456 muscle), <u>116</u>, 793 NADPH cytochrome c reductase, see NADPHheavy and light chain subunits, cytochrome reductase cross-reactivity with monoclonal NAD(P)H dehydrogenase (quinone) antibodies (quail skeletal daunorubicin-induced activity inmuscle), 113, 407 crease in neonatal beating heart isoenzyme and light chain changes, cells in culture (rat), 110, 364 correlation with translatable high activity in 9L tumor cells mRNAs in fast- to slow-transform-(rat), 111, 346 ing muscles (rabbit), 113, 325

```
possible role in bioactivation of
                                                      inhibitor, and heparin, 113, 108
      antitumor quinone, 3-bromomethyl-
                                                  receptors, binding constants
      menadione, 111, 346
                                                  (chicken, human, rat), <u>115</u>, 368 -treated PC12 cells, effect on nuclei
NADPH oxidase
  Ma<sup>2+</sup> requirement in polymorpho-
                                                      sensitivity to micrococcal nucle-
      nuclear leukocytes (guinea pig),
                                                      ase, 113, 24
      115, 261
                                               Nerves
Nafazatrom
                                                  crustacean fiber, Co^{2+} and Mn^{2+}
  oxidation by oxidizing radicals, ESR
                                                      uptake in resting state and
       and pulse radiolysis, 115, 800
                                                      during potassium depolarization,
Nafenopin
                                                      radioisotope and NMR (Collinectes
  -binding protein, detection and per-
                                                      sapidus), 111, 560
      oxisome proliferation induction
                                                 end membranes, <u>see</u> Synaptic membranes
       (rat liver cytosol), 116, 388
                                               Neural cell adhesion molecule (N-CAM)
Nalidixic acid
                                                 structural similarity to brain cell
  DNA gyrase resistance to in Pseudo-
                                                      surface protein (BSP-2) (murine
      monas aeruginosa and Esche-
                                                      brain), 112, 482
      richia coli, 110, 694
                                               Neuraminidase
Naloxone
                                                 4-methylumbelliferyl-\alpha-D-N-acetyl-
  binding sites and endogenous opioids
                                                      neuraminic acid, genetically dif-
                                                      ferent forms in sialidosis, ga-
       (Bufo viridis oocytes), 117, 718
Naphthalene-l-acetic acid
                                                      lactosialidosis, and sialolipido-
                                                      sis (human leukocytes), 117, 470
  electrochemical response induction in
                                                  -treated erythrocytes, effect on
      auxin receptor from maize leaves
      reconstituted in bilayer lipid
                                                      hemagglutination by various
      membranes, 110, 300
                                                      Escherichia coli strains (human),
                                                      111, 456
Naproxen
                                               Neuraminy1 α2-3 galactosides
  effects on arachidonic acid metabo-
                                                 binding by Escherichia coli strains,
       lism via lipoxygenase and
                                                      assay with neuraminidase-treated
      cyclooxygenase pathways (rat
                                                      human erythrocytes, 111, 456
      neutrophils from reverse passive
                                               Neurite
      Arthus reaction pleural exu-
                                                 outgrowth
dates), <u>112</u>, 586
Narasin acid
                                                   fibroblast growth factor effect on PC12 cells (rat), 114, 1189 stimulation by gangliosides (neuro-
  solvent polarity-dependent confor-
      mational equilibrium, NMR, 113,
                                                      hybrid clone SB2IB1 cells), 116, 974
Natural killer cell activity
  enhancement by
                                               Neuroblastoma
                                                 clone N1E-115, tetanus toxin effect
    leukotriene B<sub>4</sub>, herpesvirus-
      infected cell target (human
                                                      on Ca spikes, 115, 788
      lymphocytes), 113, 531
                                               Neuromedin B
    recombinant interferon v, similar-
                                                 isolation and amino acid sequence
      ity to natural interferon -
                                                      (porcine spinal cord), 114, 541
      (human lymphocytes), 111, 525
                                               Neuromedin K
                                                 isolation and amino acid sequence
Neocarzinostatin
                                                      (porcine spinal cord), 114, 533
  highly strained ether ring in
                                               Neurons
      chromophore, reaction with mer-
                                                 in cell culture, glycosyltransferase
      captan and sodium borohydride,
      NMR, <u>113</u>, 538
                                                      surface activities (chicken em-
  potentially lethal fibroblast damage,
                                                     bryo), <u>113</u>, 446
                                                 nuclear trilodothyronine receptors,
      DNA repair defective in ataxia-
                                                     neuronal growth correlation
      telangiectasia (human skin), 110,
                                                      (chicken embryo), <u>112</u>, 221
      483
                                               Neurospora crassa
α-Neo-endorphin
                                                 orotidine-5'-phosphate decarboxylase
  and dynorphin A and rimorphin, detec-
                                                      gene segment, transformation of
      tion in hypothalamus (human),
                                                     Aspergillus nidulans to photo-
      113, 30
Nerve growth factor
                                                     trophy, 112, 284
  amidolytic activity, effects of anti-
                                               Neurotensin
```

degradation by endo-oligopetidase A

thrombin III, α₁-proteinase

```
and proline-endopeptidase (rabbit
                                                       man), <u>114</u>, 855
                                                   intracellular free Ca2+ increase
      brain), 11<u>6</u>, 1151
  hypothalamic content in vivo, effects
                                                        after stimulation with chemotac-
      of thyroxine and 6-propylthiour-
                                                        tic factors (human, rabbit), 113,
       acil (rat), <u>113</u>, 248
                                                   leukotriene B4 and eicosapentaenoic
  inhibition of thyrotropin-releasing
      hormone-induced thyrotropin re-
                                                        acid-derived leukotriene Bs
      lease by pituitary gland in vitro
                                                       chemotactic and degranulating
                                                   Mg<sup>2+</sup> requirement for NADPH oxidase
       (rat), <u>113</u>, 248
  secretion from hypothalamus in vitro,
                                                        activity (guinea pig), 115, 261
      stimulation by triiodothyronin
                                                   NADPH-dependent 02 generating
       (rat), 113, 248
                                                        oxidoreductase, catalytic
Neurotoxins
                                                        activity dependent upon Ca^{2+} and Mg^{2+} (human), \underline{110}, 973
  paralytic shellfish poisoning, enzy-
      matic transformation (Proto-
 thaca staminea), 114, 465
quasi-molecular ions, detection by 127<sub>I</sub>-plasma desorption mass
                                                   particulate fraction, phospholipid-
sensitive Ca<sup>2+</sup>- dependent
                                                        protein kinase and substrates
                                                        (human), 111, 847
      spectroscopy (Naja naja siamensis
      venom), 110, 5\overline{19}
                                                   superoxide radical production induced
Neurotransmitters
  storage in nerve microsacs, <sup>19</sup>F NMR
                                                      arachidonic acid, effects of pros-
      with ring-fluorinated dopamine
                                                        taglandins E1 and I2 (hu-
       and norepinephrine (guinea pig
                                                        man), 113, 506
      brain striata), 110, 740
                                                     formyl-methionyl-leucyl-phenyl-
Neutral protease
                                                        alanine, effects of prostaglan-
  Ca<sup>2+</sup>-activated from muscle, inhibi-
                                                        dins E_1 and I_2 (human), 113,
      tion by plasma \alpha_1 and \alpha_2
                                                        506
      thiol proteinase inhibitors
                                                     phorbol myristate acetate, ef-
      (human), 110, 256
                                                        fects of prostaglandins E1
Neutron diffraction
                                                        and I_2 (human), 113, 506
  monitor for absolute stereochemistry
                                                      phorbol myristate acetate inhi-
       in fumarate to malate transforma-
                                                        bition by chloromethyl ketones
      tion by fumarate hydratase, 115,
                                                        (human), 1<u>12</u>, 671
                                                     pseudo-inhibition by soybean-
Neutrophils
                                                        derived polypeptides (human),
  activation by phorbol 12-myristate
      13-acetate, effect on intracellu-
                                                   synthetic chemotactic peptide-stimu-
      lar free Ca (rabbit peritoneum),
                                                        lated decrease in phospha-
      114, 638
                                                        tidylinosital 4,5-biphosphate and
  arachidonic acid
                                                        phosphatidylinositol 4-monophos-
    metabolism via lypoxygenase and
                                                        phate (rabbit), 112, 957
      cyclooxygenase, differential ef-
                                                   thiol protease, iC3b-forming, iso-
       fects of anti-inflammatory drugs
                                                        lation (guinea pig peritone-
       (rat reverse passive Arthus reac-
                                                        um), 117, 413
      tion pleural exudates), 112, 586
    release from platelet-activating
                                                 Nick translation
      factor after stimulation by Ca ionophore A32187 (rabbit), <u>113</u>, 72
                                                   with Escherichia coli DNA polymerase,
                                                       carcinogen-induced DNA break de-
  azurophilic granule subpopulations,
                                                       tection (human fibroblasts), 111,
      association with distinct forms
                                                       383
      of myeloperoxidase (human), 114,
                                                 Nickel(III)
                                                   -substrate interaction in carbon
  catalytic components of NADPH-
                                                       monoxide dehydrogenase,
       dependent 07 generating
                                                       nickel(III)-carbon species forma-
       oxidoreductase (human), 110, 873
                                                        tion, EPR spectra (Acetobacterium
  degranulation by platelet-activating
                                                       woodii, Clostridium thermoaceti-
       factor, potentiation by 5-L-hy-
                                                       cum), 115, 658
       droxy-6,8,11,14-eicosatetraenoic
  acid (human), 111, 1 incubated with dihomo-\gamma-linolenic
                                                   -sulfhydral-containing peptide com-
                                                       plexes and hydrogenase chro-
                                                       mophore, ESR, 115, 878
       acid, leukotriene production (hu-
```

```
Nickel ions
                                                     3,4- and 8,9-trans-dihydriols
  calcineurin activation (bovine
                                                     (rat liver microsomes), 115, 123
  brain), \underline{114}, 955 environment in urease and model
                                               7-Nitrobenz(a)anthracene trans-3,4-
                                                     dihydrodiol
      compounds, X-ray absorption spectra, \underline{112}, 279
                                                 metabolism of 7-nitrobenz(a)-
                                                     anthracene (rat liver
  substitutions after Zn, effect on
                                                     microsomes), 115, 123
      aminopeptidase activity (Aeromo-
                                               7-Nitrobenz(a)anthracene trans-8,9-
      <u>nas</u>), <u>114</u>, 646
                                                     dihydrodiol
Nicotinamide
                                                 metabolism of 7-nitrobenz(a)-
  effect on phytohemmagglutin-induced
                                                     anthracene (rat liver
                                                     microsomes), 115, 123
      lymphocyte proliferation (human),
      116, 428
                                               1-Nitrobenzo(a)pyrene
  enhancement of chondrocyte differen-
                                                 vicinal 7,8,9,10-dihydrodiol-epoxide
                                                     metabolic formation (rat liver
      tiation in limb bud cell culture
      (chicken), <u>1</u>11, 750
                                                     microsomes), 117, 541
Nicotinic acid
                                               Nitrobenzylamide
  effect on DNA stability during isch-
                                                 production from peptides containing
      emic injury (mouse), 113, 996
                                                     C-terminal nitrobenzylamine after
Niemann-Pick disease
                                                     hydrolysis by angiotensin conver-
  bone marrow transplantation, decrease
                                                     ting enzyme (human kidney), 110,
      in sphingomyelin and cholesterol
                                                     654
      accumulation in spleen (mouse),
                                               S-(4-Nitrobenzyl)glutathione
      113, 605
                                                 sequential enzyme-catalyzed metabo-
Nimodipine
                                                     lism from 4-nitrotoluene (rat
  binding to cardiac myocytes and
                                                     hepatocytes), 114, 500
      subcellular fractions (rat), 113,
                                               Nitrobenzylthioinosine
                                                 -insensitive uridine transport compo-
                                                     nent in human lymphoblastoid and
  negative iontropic action, dilitazem
      potentiation (canine, rat heart),
                                                     murine leukemia cells, 110, 417
      114, 922
                                               Nitrogenase
Nitrate reductase (NADPH)
                                                 inhibition by NH4 in wild and
  dose-depending effect on F<sub>1</sub>-ATPase
                                                     glutamine synthetase-deficient
      activity, mechanism (bovine heart), \underline{113}, 273
                                                     strains (Anabaena cycadeae), 111,
                                                     180
  ferric citrate reduction (squash
                                               Nitrogen fixation
      cotyledon), 114, 1182
                                                 connection with
  fluorescent oxidation product of
                                                   glutamine synthetase regulated by
      molybdenum cofactor, identifica-
                                                     divalent cations (Anabaena cylin-
      tion as thieno[2,3-g]pterine de-
                                                     <u>drica</u>), <u>114</u>, 206
      rivative (Escherichia coli), 111,
                                                   sym-homospermidine accumulation in
      537
                                               Cyanobacteria, 112, 606 p-Nitrophenylcarbamyl
  from spinach leaf and root, immuno-
      chemical characterization, 113, 733
                                                 in amino terminal of 3' end penta-
                                                     nucleotide from amino acyl-tRNA,
Nitrendipine receptor
                                                     peptidyltransferase affinity
  molecular size determination by
                                                     labeling (Saccharomyces cere-
      radiation inactivation analysis
                                                     visiae ribosomes), 113, 941
      (rat brain synaptic membranes,
                                               4-Nitroquinoline 1-oxide
      rabbit skeletal muscle transverse
                                                 DNA break induction, detection by
      tubule membranes), 111, 878
                                                     nick translation (human fibro-
Nitrite
                                                     blasts), 111, 383
  and oxygen electron flow distribu-
                                               4-Nitrotoluene
      tion, carbonyl cyanide m-chloro-
                                                 sequential enzyme-catalyzed metabo-
      phenylhydrazone effect (Paracoc-
                                                     lism to S-(4-nitrobenzyl)-
      cus dentrificans), 117, 252
                                                     glutathione (rat hepatocytes),
  reaction with binuclear Cu site
                                                     Ĭ14, 500
      of T2D laccase, preparation of
                                               Nitrous oxide
      Met-NO2 derivatives, EPR (Rhus
                                                 vitamin B<sub>12</sub> inactivation, effect on
      vernicifera), 112, 729
                                                     purine synthesis folate-dependent
7-Nitrobenz(a)anthracene
                                                     transformylases (rat liver), 112,
```

327

stereoselective metabolism to

Nitzschia alba	1_{H}
organic extract, ionophoretic activ-	cholecystokinin fragment
ity toward silicate, purifi-	CCK ₂₇₋₃₃ , <u>114</u> , 705
cation and properties, 114, 365	dipeptidase assay in intact ery-
Nuclear magnetic resonance	throcytes and lysates (human),
two-dimensional single quantum corre-	110, 305
lation spectroscopy and two-	
dimensional double quantum spec-	fortuitin 400 MHz spectrum in
	pyridine-d ₅ (<u>Mycobacterium for</u> -
troscopy, polymyxin B, 117, 486	<u>tuitum</u>), <u>113</u> , 121
Noradrenalin, <u>see</u> Norepinephrine	α-D-galactosyltransferase
Noradrenalin N-methyltransferase	activity (calf thymus), <u>110</u> , 124
purification and separation from	HC-toxin structure (Helmintho-
protein carboxymethyltransferase	sporium carbonum), 111, 398; 113,
(bovine adrenal medulla), 112,	10
1061	highly strained ether ring in neo-
2'-Nor-2'-deoxyguanosine	carzinostatin chromophore,
* *	reaction with mercaptan and
and acyclovir, uptake and phosphory-	sodium borohydride, 113, 538
lation in tissue culture, in	laccase relaxation, assignment to
vitro viral and cellular DNA	different Cu types (Rhus ver-
polymerase inhibition kinetics	nificera), 111, 824
(rabbit kidney), <u>116</u> , 360	
Norepinephrine	narasin acid solvent polarity-
-induced Ca ²⁺ accumulation, leucine	dependent conformational
-induced ca accumulation, reachie	equilibrium, <u>113</u> , 832
enkephalin antagonism (rat	protein two-dimensional double
atria), 117, 536	quantum spectra, spin system
inhibition of insulin binding to	identification, 11 <u>3</u> , 854
adipocytes (rat), <u>112</u> , 972	proton exchange between octanol and
2-Nor-leukotriene	water, acceleration by non-
analogs, effects on LTD4, LTC4,	steroidal anti-inflammatory
and LTE4 (guinea pig), <u>117</u> , 732	
Novobiocin	drugs, $\frac{113}{2}$, 745
effect on X-ray-induced DNA repair	two-dimensional correlated spec-
during reconstitution (L1210	troscopy
cells), 112, 1077	improved resonance with double
Nuclear magnetic resonance (NMR)	quantum filtering, 117 , 479
nuclear magnetic resonance (mm)	proton-proton spin-spin coupling
13 _C	constants in proteins, 113 , 967
HC-toxin structure (Helminthosporium	2 _H
carbonum), 111, 398; 113, 10	dioleoyl phosphatidic acid poly-
highly strained ether ring in neo-	morphic preferences, 111, 675
carzinostatin chromophore,	isotope fractionation in conversion
reaction with mercaptan and	of mono- and disaccharides to al-
sodium borohydride, <u>113</u> , 538	cohols, 111, 890
lipid bilayer dynamics, rhodopsin-	31 _p
lipid interactions (bovine	adriamycin cardiotoxicity detection
retina), 114, 1048	(perfused rat heart), 110, 339
⁴³ Ca, Ca ²⁺ -concanavalin A	dioleoyl phosphatidic acid polymor-
solutions, <u>115</u> , 22	This professors 111 675
Cu-surrounding in plantacyanin	phic preferences, 111, 675
(cucumber), 117, 385	DNA, effects of $\underline{\text{meso-tetra}}(4-\underline{\text{N-}})$
derivatives of glycolipid antigen	methylpyridyl)porphine and Zn ²⁺
from pancreatic carcinoma (hu-	
	and Ni^{2+} derivatives, 113 , 148
man), <u>110</u> , 383 19 _F	phosphocreatine deuterium-induced
	signal splitting, <u>114</u> , 1117
disposition of 6-fluorodopamine and	pyridoxal 5'-phosphate binding to
6-fluoronorepinephrine in	tryptophan synthase (Escherichia
striata-region nerve microsacs	coli), 111, 817
(guinea pig brain), 110 , 740	spin-spin relaxation analysis of
8-fluoro-8-demethylriboflavin	breast tissue, effect of storage
interaction with riboflavin-bind-	time and temponature (human)
ing protein (hen egg white), 110 ,	time and temperature (human),
406	112, 991

```
promegestone localization in chroma-
  water proton spectra from crustacean
                                                       tin fraction of cultured hepatoma
      nerve fibers in resting state and
                                                       cells, <u>110</u>, 719
      during potassium depolarization, Co<sup>2+</sup> and Mn<sup>2+</sup> uptake
                                                  thymocyte, Triton X-100-resistant
                                                       glucocorticoid receptors, pre-
       Collinectes sapidus), 111, 560,
                                                       ferential solubilization by de-
  67<sub>Zn</sub>, Zn<sup>2+</sup>-concanavalin A
                                                       oxyribonuclease I (rat), 111, 760
       solutions, <u>115</u>, 22
                                                Nucleosidediphosphatase
Nuclease
                                                  -substrate interactions with deoxy-
  2',5'-A_n-dependent, activation by
                                                       ribonucleoside diphosphates,
      2',5'-A4 tetramer analog to hy-
                                                       ribonucleoside diphosphates, and
       drólyze vesicular stomatitis vi-
                                                       phosphorylated B vitamins (rat
       rus mRNA, 111, 205; erratum, <u>114</u>,
                                                       hepatocyte Golgi fraction), 113,
      1200
                                                       178; <u>erratum</u>, <u>114</u>, 1200
  in hybridoma supernatants, degrada-
                                                Nucleoside-5'-monophosphate
       tion of reverse transcriptase
                                                  formation from 2-aminopyrimidine and
       high-molecular-weight products
                                                       ribose-5-phosphate aqueous reac-
       (mouse), <u>112</u>, 265
                                                       tion, <u>117</u>, 93
  micrococcal, digestion of PC12 cell
                                                Nucleosomes
       nuclei, decrease after cell
                                                  DNA-binding proteins resistant to
       treatment with nerve growth fac-
                                                       dissociation by sodium dodecyl
       tor, 113, 24
                                                       sulfate (chicken erythrocyte nu-
                                                       clei), 114, 99
Nuclease S1
                                                5'-Nucleotidase
  inhibition by adenovirus-specific
                                                  Mg<sup>2+</sup>-activated on exterior side of
      DNA-binding protein, 110, 443
                                                       erythrocyte membrane, properties
  site cleavage within supercoiled
                                                       (rat), 112, 407
      plasmid containing 5'-flanking
                                                Nucleotides
      sequences of human ß-globin gene,
                                                  binding process to heavy meromyosin
      protection by high-mobility-group proteins HMG1 and HMG2 (Aspergil-
                                                       active site (rabbit), 115, 312
                                                  cyclic, see Cyclic nucleotides
      lus oryzae), 112, 547
                                                Nucleotide sequences
Nuclei
                                                  actin genes from Drosophila melano-
  binding of
                                                      gaster, homology with other
    Alu sequences (human HeLa cells),
                                                       species, 111, 67
      117, 378
                                                  cDNA clone for aldolase B (human),
    monoclonal antibodies to calf
                                                      117, 601
      uterus cytoplasmic estrogen re-
                                                  opsin cDNA clone (bovine), 116, 563
      ceptor (murine uterus), <u>114</u>, 107
                                                  5-S ribosomal RNA from mushroom
  chromatin solubility
                                                       (Coprinus c<u>ine</u>reu<u>s</u>), 116, 148
    increase after <u>in vitro</u> or <u>in vivo</u>
                                                  tRNAmet (wheat germ), 114, 1161
      treatment with triiodothyronine
                                                  promoter and NH2-terminal signal
      and angiotensin (rat liver), 110,
                                                      peptide region of a-amylase gene
                                                       Bacillus subtilis), 112, 678
    inhibition by proteolytic inhibitors (rabbit thymus), 110, 216
                                                  tRNALeu from Bacillus stearother-
                                                      mophilus, <u>112</u>, 578
  dexamethasone-receptor complex
      associated with RNA, isolation
      and properties (HeLa cells), 113,
                                                                     0
      876
  gonadotropin, plasma membrane
                                                6,9,12-Octadecatrienoic acid
      receptors (rat ovary), <u>111</u>, 127
                                                  ω6-oxygenation by lipoxygenase
  matrix, high-molecular mass phospho-
                                                       (human platelets), 117, 593
      protein extraction, iden-
      tification of 110,000-dalton spe-
      cies (rat liver), <u>114</u>, 183
                                                  proton exchange with water, accelera-
  from nerve growth factor-treated PC12
                                                      tion by nonsteroidal anti-
                                                      inflammatory drugs, NMR, 113, 745
      cells, resistance to digestion by
                                                2-Octaprenylphenol
      micrococcal nuclease, 113, 24
  neuronal, triiodothyronine receptor
                                                  hydroxylation to ubiquinone 8 by
      increase during brain development
                                                      membrane-bound cytochrome o and
      (chicken embryo), <u>112</u>, 221
                                                      cytoplasmic NADPH cytochrome c
```

```
Organophosphates
      reductase (Escherichia coli),
      111, 830
                                                  pesticide fenitrothion, degradation
OctitoT
                                                      by phosphatase from Alcaligenes
                                                      NC<sub>5</sub>, <u>110</u>, 412
  and heptitol components, identifi-
      cation in lens (human, Octodon
                                               Ornithine decarboxylase
      degu), 116, 988
                                                  GTP-insensitive, spermine synthesis
Octyl-Sepharose
                                                      (Acetobacteria), 114, 779
  -rhodanese apolar interaction, 111,
                                                  inhibition by
                                                    α-difluoromethylornithine, differ-
Oleate
                                                      entiation induction in em-
  binding to hepatic sinusoidal plasma
                                                      bryonal carcinoma cells (mouse).
      membranes in vitro (rat), 112, 88
                                                      114, 410
2',5'-Olidoadenylate synthetase
  binding protein activity, temperature
                                                    (2R,5R)-6-heptyne-2,5-diamine
      effect (mammalian extracts), 117,
                                                      (rat), <u>116</u>, 237
                                                    interferons (human fibroblast
Oligoadenylic acid (2',5'-A)
                                                  cells), 114, 950 stimulation by
  2',5'-A4 tetramer analog synthesized
      from cordycepin 5'- triphosphate
                                                    hyperoxia (rat lungs), 113, 491
       in rabbit reticulocyte lysate,
                                                    luteinizing hormone, testosterone
      protein synthesis inhibition,
                                                      production stimulation comparison
      111, 205; erratum, <u>114</u>, 1200
                                                      (rat testicular cells), 112, 496
Oligomycin
                                                Orthophosphate
  interaction with proton-translocating
                                                  role in α-glucan phosphorylase-
      ATPase, kinetics (bovine cardiac
                                                      catalyzed transfer of glucosyl
      mitochondria), 111, 333
                                                      residue from α-D-glucosyl
Oligosaccharides
                                                      fluoride to oligosaccharides,
  asparagine-linked in Fc region of
                                                      111, 530
      immunoglobulin D, structure and
                                               Orthovanadate
      location (human), 110, 181; erra-
                                                  in ATP preparations, induction of
  \frac{\text{tum}}{\text{glucosyl}}, \frac{112}{\text{residue}} transfer from \alpha-D-
                                                      muscarinic binding site loss (rat
                                                  corpus striatum), <u>110</u>, 567
Ca transport stimulation in plasma
      qlucosyl fluoride, catalysis by
      α-glucan phosphorylases, 111, 530
  O-glycosidically linked of poly-N-
                                                      membrane (wheat protoplasts),
      acetyllactosamine type in
                                                      113, 171
                                                  induction of muscarinic binding site
      leukocyte common antigen, dif-
      ferences in B and T cells (human), \underline{110}, 424
                                                      loss (rat corpus striatum), 110,
                                                      567
  released from glycopeptides by glyco-
                                                y-Oryzanol
      peptidase acting on B-aspartyl-
                                                  and superoxide generated by cyto-
      glucosamine linkages, identi-
                                                      chrome P-450 model system,
      fication, 112, 155
                                                      reaction kinetics, 115, 1002
                                                Ouabain
  cumulus-egg complexes, caudal epi-
                                                  binding sites on small muscle biop-
      didymal sperm forward mobility
                                                      sies, determination by vana-
                                                      date-facilitated [3H]ouabain binding to Na<sup>+</sup>,K<sup>+</sup>-ATPase
      stimulation (bovine), 115, 777
Opiate receptors
  binding profile, peptide E and \beta-
                                                      (rat), <u>111</u>, 319
      endorphin (rat brain membrane),
                                                Ouabain receptors
      114, 1084
                                                  in skeletal muscle plasma membranes
                                                      during purification (rabbit),
  8, binding of synthetic peptide
      deltakephalin (rat brain mem-
                                                      112, 521
      branes), 111, 390
                                                Ovoinhibitor
                                                  immunological cross-reactivity with
Opioids
                                                      ovomucoid (chicken egg white),
  receptor binding properties on
                                                      <u>110</u>, 75
       cerebellar and brain membranes
       (rabbit), 111, 1096
                                                Ovomucoid
                                                  immunological cross-reactivity with
Opsin
                                                      ovoinhibitor (chicken egg white),
  cDNA clone, isolation and nucleotide
```

110, 75

sequence (bovine), 116, 563

1983 Cumulative

Oxalate	hyaluronidase activity (rat),
effect on pyruvate, orthophosphate	<u>117,</u> 71
dikinase_activation-inactivation	and nitrite electron flow distribu-
by adenylate energy charge (Zea	tion, carbonyl cyanide m-chloro-
mays chloroplasts), 115, 673	phenylhydrazone effect (Paracoc-
Oxamate	cus dentrificans), 117, 252
effect on pyruvate, orthophosphate	reactive, production, arachidonic
dikinase activation-inactivation	acid metabolism (rat peritoneal
by adenylate energy charge (<u>Zea</u>	macrophage), <u>114</u> , 549
mays chloroplasts), 115, 673	requirement for $Cu(II)$ -induced
Oxidation	hemolysis (rabbit erythrocytes),
ascorbic acid, role of bicyclic ring	115, 680 singlet
formation, <u>115</u> , 531 Oxidative phosphorylation	generation by
uncoupling by dimethyl sulfoxide in	photochemical system or in
vivo and dimethyl sulfide in	Phanerochaete chrysosporium,
vitro (rat hepatic mitochondria),	
110, 325	<u>111</u> , 200
Oxidor edu ctase	sensitized monofunctional and
coupled with luciferase, concentra-	bifunctional psoralens,
tion effect on bioluminescence	biological activities, <u>112</u> , 638
(<u>Vibrio harveyi</u>), <u>111</u> , 266	1 Ag molecular, quenching by
NADPH-dependent 02 generating,	C-ascorbic acid in aqueous media,
Ca ²⁺ and Mg ²⁺ requirement	<u>115,</u> 932 role in hyaluronic acid
(human neutrophils), 110, 973	degradation (human), 115, 894
delineation of components in	toxicity
phorbol myristic acetate-stimu- lated neutrophils (human), 110,	of active species, membrane unsat-
873	uration fatty acid independence
	(Escherichia coli), 113, 301
4-0xo-5-hydroxyvalerate dehydrogenase catalyzing 4,5-dioxovalerate forma-	polyamine metabolism stimulation in
tion, purification of two	lungs (rat), <u>1</u> 13, 491
isozymes (rat liver), 112, 986	Oxytocin
2-0xoisovalerate dehydrogenase (lipo-	binding to myoepithelial cell mem-
amide)	branes from mammary tissue,
active unphosphorylated form in	estrogenic-compound effects
heart, liver, and kidney, effects	(rat), <u>112</u> , 717 [Ile ⁸]-Oxytoc in
of fasting, diabetes, and protein	identification (Macropus fuliginosus
starvation (rat), 111, 74	posterior pituitary gland), 116,
12-Oxo-phytodienoic acid	258
converted from linoleic acid by	
lipoxygenase-catalyzed reaction,	
jasmonic acid formation (<u>Vicia</u> faba pericarp), 111, 470	
Oxygen Der (carp), 111, 470	P
affinity to hemoglobin-inulin conju-	D.lmikiiJ
gate, use as blood substitute	Palmitic acid
(rat), <u>113</u> , 513	conversion from trans-2-hexadecanoyl-
consumption by microsomes with	CoA by enoyl-CoA reductases (rat
organic hydroperoxides, cytochrome	hepatic microsomes), <u>113</u> , 659 incorporation into various phospho-
<u>P-450</u> role (rat liver), <u>110</u> , 646	lipids, effect of all-trans-
evolution	retinoic acid (guinea pig
from inside-out thylakoid vesicles,	peritoneal granulocytes), 114, 261
inhibition by Mn ²⁺ and surface	Palmitoyl-CoA desaturase
protein removal by EDTA washing (pea chloroplasts), 110, 545	microsomal, changes in ergosterol-
(pea chloroplasts), 110, 545	replaced Tetrahymena pyriformis
in photosystem II thylakoid	cells, temperature effects, <u>113</u> ,
particles, reversible inhibition	96 Palmitoyl coenzyme A
by NaC1, 23,000-dalton protein role, 113, 738	inhibition of DNA polymerases α and
-induced lung injury, effect on	γ (sea urchin eggs), 110, 902
	2337, 220,

```
bromide (porcine), 111, 630
Pancreas
  acinar cell culture, epidermal growth
                                               Peptidase
      factor specific binding (rat).
                                                 enkephalin-degrading, distribution
      <u>111</u>, 1066
                                                      (murine brain neuronal, glial
Pancreatic islets
                                                      cells), 115, 423
  B cells
    dibutyry] cAMP-induced Ca<sup>2</sup> influx and Ca<sup>2+</sup>-dependent membrane
                                                 antibiotic, trichorzianine A1. <sup>1</sup>H
                                                      NMR spectra (Trichoderma harzi-
      potential (mouse), 112, 614
                                                      anum), 116, 1
    purification, fluorescence-
                                                 atrial muscle, amino acid sequence
      activated cell sorting (rat),
                                                      (rat), <u>117</u>, 859
      <u>114</u>, 835
                                                 from bovine, human, and rat serum
Pancreatic stone proteins
                                                      albumins, spontaneous formation
  inhibition of calcium carbonate
                                                      of intra- and interspecies hybrid
      precipitation from supersaturated
                                                      molecules, 114, 20
      solutions (human), 110, 69
                                                 with C-termianl D-alanine, substrate
Papain
                                                      for porcine pituitary amidating
                                                      enzyme, 117, 289
  active site substrate conformation,
                                                 with C-terminal nitrobenzylamine,
      resonance Raman spectra compari-
                                                      hydrolysis by angiotensin
      son with chymopapain, ficin, and
      bromelain, <u>117</u>, 725
                                                      converting enzyme to nitro-
Parathyroid hormone
                                                      benzylamide (human kidney), 110,
  [Asn<sup>76</sup>], solution synthesis and
                                                 E, opiate receptor binding, compari-
      characterization (human), 114, 493
                                                      sion with β-endorphin (rat brain
Parvovirus
                                                      membrane), 114, 1084
  ssDNA replication to unit-length
                                                 -hemin complexes, thiol-containing
      dsDNA product by DNA polymerase y
                                                      cytochrome P-450 models (bovine),
      (bovine), <u>117</u>, 580
                                                      115, 590
Peanut agglutinin
  binding to intestinal microvillus
                                                 hypothalamic luteinizing hormone-
      membranes, decrease during post-
                                                      releasing hormone synthesis, pre-
      natal development (rat), 113,
                                                      cursor characterization (human,
      400; erratum, 116, 355
                                                      mouse, rat), 117, 872
                                                 IgG tuftsin-containing fragments,
D-Penicillamine
                                                      synthesis and biological activity
  Cu-chelating, plasma ferroxidase
                                                      (mouse), 115, 193
      decrease without anemia induction
      (rat), 113, 127
                                                 non-opioid, proenkephalin-derived,
                                                      amino acid sequence (bovine adre-
Pentanucleotides
                                                      nal gland), <u>113</u>, 229
  3'-terminal from p-nitrophenyl-
                                                  sperm activating, purification,
      carbamyl-amino acyl-tRNA, lack of
                                                      action, and amino acid sequence
      covalent binding to peptidyl-
                                                      (Anthocidaris crassispina egg
      transferase (Saccharomyces cere-
      visiae ribosomes), 113, 941
                                                      jelly), <u>117</u>, 147
                                                  sulfhydral-containing, -Ni(III)
Pentapeptides
                                                      complexes and hydrogenase Ni(III)
  containing diastereoisomeric
                                                  chromophore, ESR, \underline{115}, 878 synthetic, N-terminal murine \gamma-inter-
      y-methylglutamic acid, substrates
      for vitamin K-dependent micro-
                                                      feron, antibody production and
      somal carboxylation (rat), 113,
      454
                                                      characterization, 117, 866
Pentasaccharides
                                                  triiodothyronine-containing from
  blood group Sd<sup>2</sup> active, from
                                                      thyroglobulin, amino acid se-
      Hamm-Horsfall urinary glycopro-
                                                      quence (porcine), 112, 206
      tein, isolation and structure
                                               Peptidoglycans
       (human), 115, 625
                                                  linkage to poly(galactosylglycerol
Pepsin
                                                      phosphate) by glucosyl\beta(1>4)N-
  immunoglobulin λ chain digestion in
                                                      acetylglucosamine (Bacillus coag-
      urea, fragment isolation and
                                                      ulans cell wall), <u>111</u>, 312
      characterization, 111, 89
  modification by photoaffinity reagents
```

1,2-epoxy-3-(4'-azido-2'nitrophen-

oxy)propane and p-azidophenacyl

Peptidyl-puromycin

synthesis catalyzed by peptidyltransferase, inhibition by

Phagocytosis

1983 Cumulative

```
sparsomycin analog (Escherichia
                                                selective, senescent and in vitro
      <u>coli</u>), <u>114</u>, 1
                                                     aged erythrocytes by macrophages,
Peptidyltransferase
                                                    receptor identification (rat
  lack of affinity labeling with
                                              liver), <u>115</u>, 551
Phanerochaete chrysosporium
      3'-terminal pentanucleotide from
      p-nitrophenylcarbamyl-amino acyl-
                                                lignin model compound degradation,
      TRNA (Saccharomyces cerevisiae
                                                     lack of 10_2 involvement, 111_1,
      ribosomes), II3, 941
                                                     200
  peptidyl-puromycin synthesis,
                                              Phenacetin
      inhibition by sparsomycin analog
                                                mutagenicity to Salmonella typhi-
      (Escherichia coli polysomes),
                                                    murium, metabolic activation by
      114, T
                                                    hepatic microsomes (hamster,
Peroxidase
                                                    rat), 110, 746
  -activated hypoiodous acid in
                                              Phenanthrene
      tyrosine iodination, 116, 639
                                                intercalative binding to DNA,
  -catalyzed reactions, hydroxamic acid
                                                     fluorescence and photoelectron
      effect, 116, 916
                                                     study, 112, 1
  thyroid, iodide-dependent catalytic
                                                plasmid pKG2-dependent oxidation
      activity (porcine), 112, 475
                                                     (Beijerinckia sp.), 111, 939
Peroxisomes
                                              o-Phenanthroline
                                                 -mediated DNA polymerase 1 inhibition
  proliferation induction and nafenopin-
      binding protein (rat liver cyto-
                                                     (Escherichia coli), 115, 567
      sol), 116, 388
                                              Phenobarbital
                                                 cytochrome P-450-dependent mono-
Pertussis toxin
                                                     oxygenase increase after neo-
  effect on
                                                     natal administration (adult rat
    basal- and forskolin-stimulated
                                                     liver), 114, 1132
       adenylate cyclase inhibition by
                                                 induction of p-nitrophenol UDP-
       GTP or guany1-5'-y1 imido-diphos-
                                                     glucuronyTtransferase activity,
       phate (rat adipocytes), 116, 651
                                                     comparison with ethanol induction
     inhibition by somatostatin of
                                                     (rabbit hepatic microsomes), 111,
       forskolin- and isoproterenol-
                                                     219
       stimulated cAMP accumulation
                                               Phenol-epoxides
       (murine anterior pituitary tumor
                                                 metabolites of polycyclic aromatic
    cells), 115, 794 regulation of insulin-activated
                                                     hydrocarbons, chemical rearrange-
                                                     ment to quinone-methides, 117, 129
       cAMP phosphodiesterase (3T3-L1
                                               Phenol 2-monooxygenase
       adipocytes), <u>116</u>, 593
                                                 regulation by Mg-ATP, pH effect (rat
  islet-activating protein, D<sub>2</sub>
                                                     liver microsomes), 116, 966
       dopamine receptor affinity de-
                                               Phenothiazines
       crease, membrane protein ADP-
                                                 displacement from phospholipid
       ribosylation (bovine brain), 115,
                                                     binding sites by cholesterol,
       325
                                                     114, 1001
Pesticides
                                                 solubility in erythrocyte membrane,
  organophosphorous fenitrothion,
                                                     photoaffinity labeling (human),
       degradation by phosphatase from
                                                     116, 469
       Alcaligenes NC<sub>5</sub>, <u>110</u>, 412
                                               Phenylalanine
pН
                                                 stimulation of phenylalanine
  effect on phenol 2-monooxygenase
                                                     hydroxylase limited proteolysis
       regulation by Mg-ATP (rat liver
                                                     by chymotrypsin, 110, 919
      microsomes), 116, 966
                                               Phenylalanine hydroxylase, see
  intracellular, effects of phorbol
                                                     Phenylalanine 4-monooxygenase
       esters, platelet-derived growth
                                               Phenylalanine 4-monooxygenase
       factor, vasopressin, and serum
                                                 limited proteolysis by chymotrypsin,
       (Swiss 3T3 cells), <u>116</u>, 931
                                                     phenylalanine and tetrahydro-
   intralysosomal, relation to cystine
                                                     biopterin effects (rat liver),
       accumulation (normal, cystinotic
                                                     110, 919
       human fibroblasts), 116, 154
                                                 regulation in vivo by glucocorticoids (rat liver), 115, 965
   low, induction of fusion in small
       unilamellar phospholipid vesi-
                                               1-Phenyl-1-aminomethylene
       cles, 110, 15
                                                 oxygenation to 2,3-dihydroxy-2-
```

collapse, prevention by ADP or

ATP with Mg^{2+} (rat liver), 111,

1983 Cumulative

phenylpropylamine by dopamine

B-hydroxylase, enzyme inactiva-

```
tion (bovine adrenals), 110, 161
                                                  -dependent ruthenium red-insensitive
Phenylbutazone
                                                      Ca<sup>2+</sup> uptake (mung bean mito-
  proton exchange acceleration between
                                                      chondria), 114, 1176
       octanol and water, anti-inflamma-
                                                  inorganic, role in cyclic-2,3-
       tory activity correlation, 113,
                                                      diphospho-D-glycerate levels in
                                                      Methanobacterium thermoauto-
Phenylethanolamine N-methyltransferase,
       see Noradrenaline N-methyltrans-
                                                      trophicum, 116, 1125
      <del>fer</del>ase
                                                  transport
                                                    across amnion and visceral yolk sac
Phenylglyoxal
                                                       in maternal-to-fetal direction in
  inactivation of γ-glutamyl-trans-
                                                       vitro (guinea pig), 110, 438
      ferase, protection by gluta-
                                                    active in mitochondria, inhibition by tribenzylphospate (Saccharo-
      thione (rat kidney), 112, 564
  inhibitory effect on chloride and
                                                      myces cerevisiae), 113, 751
      sulfate ion transport across
                                                Phosphatidic acid
      erythrocyte membranes (human),
                                                  stimulation of autophosphorylation of
      110, 616
                                                      cAMP-dependent protein kinase
Phenylhydrazine
                                                       catalytic unit (bovine heart),
  and bovine plasma or lentil seedling
                                                      113, 916
      Cu-amine oxidase, reaction
                                                  turnover, stimulation by prostaglandin
      mechanism and stoichiometry, 115,
                                                      F_{2\alpha} (rat luteal cells), \underline{116}, 39
      841
                                                Phosphatidylcholine
Phenylhydrazine hydrochloride
  effect on 34,000-dalton inhibitor of Ca<sup>2+</sup>-dependent cysteine pro-
                                                  bilayers, hydrolysis by phospholipase
                                                       A or C, diacylglycerol and cell
      teinase (rat liver cytosol), 115,
                                                       stimulation roles (human, rat),
      715
                                                       117, 196
Phorbol 12.13-dibutyrate
                                                  conversion from phosphatidyl-
  -stimulated intracellular pH increase
                                                       ethanolamine via transmethylation
       (Swiss 3T3 cells), 116, 931
                                                     increase in alcoholism (rat
Phorbol esters
                                                       myocardium), 111, 710
  inhibition of 12-0-tetradecanoyl-
                                                    cytosolic inhibitors (rat liver),
      phorbol-13-acetate binding to
                                                       112, 108
       sphingomyelin, 112, 709
                                                Phosphatidylethanolamine
Phorbol ester receptors
                                                  S-adenosyl-L-methionine-mediated
  cytosolic, comparison with mem-
                                                      methylation, regulation by GTP
      brane-bound receptor properties
                                                       (rat hepatic plasma membrane),
       (mouse), 111, 340
                                                       114, 425
Phorbol myristate acetate
                                                  methylation to phosphatidylcholine
  superoxide radical induction in
                                                    S-adenosyl-L-methionine-mediated,
       neutrophils, effects of prosta-
                                                       inhibition by cytosolic inhibi-
       glandins E1 and I1 (human),
                                                       tors (rat liver), 112, 108
       113, 506
                                                     increase in alcoholism (rat
Phorbol 12-myristate 13-acetate
                                                       myocardium), 111, 710
  neutrophil activation, effect on
                                                Phosphatidylglycerol
       intracellular free Ca (rabbit
                                                  biosynthesis, acyl transferase role
      peritoneum), 114, 638
                                                       (canine lung microsomes), 116, 23
Phosphatase
                                                Phosphatidylinositol
  organophosphate-hydrolysing, isola-
                                                  bilayers, hydrolysis by phospholipase
       tion from bacterium Alcaligenes
                                                       A or C, diacylglycerol and cell stimulation roles (human, rat),
       NC<sub>5</sub> by Cibacron 3GA-Sepharose
       affinity chromatography, 110, 412
                                                       117, 196
  spontaneously active aortic, effects
                                                  -containing liposomes, induction of
       on myosin phosphorylation and
                                                       human or murine tumor cell cyto-
       actin-myosin interaction (bo-
                                                  toxicity (plant), 114, 863
myo-inositol incorporation with CMP,
Mn2+-dependent activity (rat
       vine), 111, 906
Phosphates and Ca<sup>2+</sup>,
            , induction of mitochon-
                                                       brain synaptosomes), 112, 817
       drial membrane potential
```

```
stimulation of autophosphorylation of
                                                          splitting, 114, 1117
       cAMP-dependent protein kinase
                                                   Phosphoenolpyruvate
       catalytic unit (bovine heart),
                                                     -ATP counter-transport system in C<sub>3</sub>
                                                          and C<sub>4</sub> chloroplasts (maize, pea), 116, 945
       <u>113</u>, 916
  synthesis
     and degradation in embryonic
                                                   6-Phosphofructokinase
       cell line, inhibition by
                                                     activation by AMP and fructose-2,6-
    dexamethasone (human fibro-
blasts), 110, 200
de novo in activated mast
cells, Ca<sup>2+</sup> uptake and
                                                          bisphosphate, kinetics (Saccharo-
                                                          myces cerevisiae), 111, 294
                                                     during diabetes and fasting, stabil-
                                                          ization by fructose 2,6-bis-
       histamine release (rat), 111, 581
                                                          phosphate (rat liver), 113, 548
  turnover
                                                     isozymes with high specific activ-
     glucose-stimulated, effects of
                                                          ities, purification (rat liver,
       insulin secretion inhibitors
                                                          muscle), <u>111</u>, 462
       and stimulators (rat pancreatic
                                                     response to variation in adenylate energy charge, NH<sub>4</sub> and AMP
       islets), 112, 419
     role in antigen-stimulated
Ca<sup>2+</sup>-influx and histamine re-
                                                          deaminase regulatory roles
                                                          (permeabilized Saccharomyces
       lease (rat mast cells), 117, 710
                                                          cerevisiae), 112, 96
     stimulation by prostaglandin
                                                   Phosphoinosítides
       F_{2\alpha} (rat luteal cells), 116, 39
                                                     metabolism in [3H]glycerol- or
Phosphatidylinositol-4,5-bisphosphate
                                                          [3H]arachidonic acid-prelabeled
  metabolism in platelets, thrombin
                                                          platelets, thrombin effects (human), \underline{110}, 108
   effects (human), 110, 108 in neutrophils, rapid decrease by
                                                   Phospholipase A
       chemotactic peptide (rabbit),
                                                     hydrolysis of phosphatidylcholine or
       112, 957
                                                          phosphatidylinositol bilayers,
   [<sup>32</sup>P]phosphate labeling during ADP-
                                                          diacylglycerol and cell stimula-
       induced platelet aggregation
                                                          tion roles (human, rat), 117, 196
       (rabbit), <u>113</u>, 483
                                                   Phospholipase A2
Phosphatidylinositol 4-monophosphate
                                                     modulation by calmodulin, prosta-
  in neutrophils, rapid decrease by
                                                          glandins, and cyclic nucleotides
       chemotactic peptide (rabbit),
                                                     (snake venom), 115, 94 thrombin-activated, inhibition by
       112, 957
Phosphatidylserine
                                                          cAMP (human platelets), 112, 693
  effect on neutralized vesicular
                                                   Phospholipase C
       stomatitis virus binding to host
                                                     activity in plasma membranes (lapine
  cells (rabbit), 114, 774 requirement for 12-0-tetradecanoyl-
                                                          synovial cells), 115, 331
                                                     endogenous polyphosphoinositide
       phorbol-13-acetate binding by
       cytosolic protein (mouse), 111, 340
                                                          cleavage, product identification
                                                          (guinea pig synaptic membranes),
                                                          <u>112</u>, 919
  stimulation of autophosphorylation of
                                                     hydrolysis of phosphatidylcholine or
       cAMP-dependent protein kinase
                                                          phosphatidylinositol bilayers,
       catalytic unit (bovine heart),
                                                          diacylglycerol and cell stimula-
       113, 916
                                                          tion roles (human, rat), 117, 196
  synaptosomal, chronic ethanol
                                                     stimulation of human platelet and
       consumption-induced increase
  (guinea pig), 113, 262
vesicles, effect on Na<sup>+</sup>,K<sup>+</sup>-ATPase
activity (cultured BHK 21 cells),
                                                          erythrocyte prothrombinase ac-
                                                          tivity (Clostridium welchii).
                                                          117, 803
                                                   Phospholipid methyltransferase
       115, 470
                                                     myocardial, activity increase in
Phosphinic acid
                                                          alcoholism (rat), \underline{111}, 710
  MP-103, MP-104, and MP-105 deriva-
                                                   Phospholipids
       tives as metabolites in bi-
       alophos biosynthesis (Streptomy-
                                                     acylation by incorporation of
                                                          palmitic and arachidonic acids,
       ces hygroscopicus SF-1293
                                                          all-trans-retinoic acid effects
       mutant), 111, 1008
                                                          (guinea pig peritoneal granulo-
Phosphocreatine
                                                          cytes), 114, 261
  31p NMR, deuterium-induced signal
                                                     binding sites, phenothiazine dis-
```

```
role (rabbit skeletal muscle),
      placement by cholesterol, 114,
                                                        115, 871
  and Ca-activated protein kinase,
                                                   latent, activity modulation by
       isolation and characterization
                                                        histone H1 and polylysine (bovine
      (murine lymphosarcoma cells), 116, 675
                                                        aortic smooth muscle), 117, 493
                                                   mammalian and yeast, stimulation by
                                                       megamodulins from various
  composition, ethanol effect (bovine
      HeLa cells), 114, 985
                                                        sources, 114, 403
  -dependent protein kinase, inhibition
                                                   purified catalytic unit, inhibition
                                                        by glycogen (rabbit muscle), 114,
      by quercetin (murine brain cyto-
      sol), 117, 444
  hydrolysis, stimulation by mercuric
                                                   stimulation by histone H1 (rabbit
      chlorid as Ca-mimetic agent
                                                        skeletal muscle), 117, 501
       (murine fibroblasts), 110, 758
                                                 Phosphoproteins
  membrane, methylation, isopro-
                                                   Ca-binding, naturally occurring
      terenol-induced adenylate
                                                        N - and N^T-histidinoalanine
      cyclase, stimulation effect (myo-
                                                        crosslinks (Rangia cuneata extra-
  genic cell lines), 114, 339 metabolism in activated mast cells, Ca<sup>2+</sup> uptake and histamine
                                                   pallial fluid), 114, 304
Ca<sup>2+</sup> transport-ATPase intermediate
                                                        (rabbit sarcoplasmic, rat endo-
  release (rat), <u>111</u>, 581 from mitochondrial-lysosomal frac-
                                                        plasmic reticulum), 114, 584
                                                   high-molecular mass in hepatic
      tion, activation of lysosomal
                                                        nuclear matrix, identification as
      cathepsin D (porcine adrenal
                                                        110,000-dalton species (rat),
      cortex), 110, 934
                                                        114, 183
  photoreceptor in retinal cell mem-
                                                   m, insulin-stimulated phosphorylation
      brane, reduced phosphorylation in
                                                        (rat adipose tissue), 117, 758
      visual mutants (Drosophila
                                                   nuclear, topoisomerase I activity
      melanogaster), 111, 567
                                                        stimulated by phosphorylation in
                                                        vitro (Novikoff hepatoma), 111,
  plasma membrane, linoleic acid
      incorporation, effect on ATPase
                                                        897
      activities and physical proper-
                                                   pp 105, cellular localization
      ties (rat liver), 117, 809
                                                        (various species), 116, 106
  suspensions with Gramicidin A
                                                 Phosphoribosylaminoimidazolecarboxamide
       incorporated as channel struc-
                                                       formyltransferase
      ture, ir spectra, <u>114</u>, 373
                                                   stimulation by nitrous oxide-induced
  synthesis, bethanecol and sincalide
                                                        inactivation of vitamin B<sub>12</sub>
      stimulation effects (human, rat
                                                        (rat liver), 112, 327
  pancreas), 115, 771
vesicles, see Liposomes
                                                 Phosphoribosylglycinamideformyl-
                                                        transferase
                                                   inhibition by nitrous oxide-induced
Phosphomannosyl receptors
  and Dictyostelium discoideum
                                                        inactivation of vitamin B<sub>12</sub>
      \alpha-mannosidase, interactions (bovine liver), 116, 541
                                                        (rat liver), 112, 327
                                                 Phosphorylase
Phosphonofluoridates
                                                   \underline{\underline{a}} and \underline{\underline{b}} activities, anoxia and cyanide effects (rat hepato-
  inactivation of elastase and
                                                 cytes), 115, 1033
Phosphorylase a
      chymotrypsin, 112, 1085
Phosphoprotein phosphatase
                                                   subtilisin-inactivated, binding of
  activity in insulin receptors,
                                                        glucose and AMP with discontinued
      phosphorylation reversibility
                                                        interaction between two binding
       (rat liver), 117, 885
                                                 sites, <u>113</u>, 825
Phosphorylase kinase
  ATP- and Mg-dependent intercon-
      version, deinhibitor protein role
                                                   purification and properties (bakers'
       (canine liver), <u>116</u>, 349
                                                        yeast), <u>114</u>, 331
  inhibition by heat-labile protein
                                                 Phosphorylase phosphatase
       from skeletal muscle (rabbit),
                                                   activation by heat-stable protein
      113, 439
                                                        histone Hl (calf thymus, swine
  inhibitor-2, heat stable, purifica-
                                                        renal cortex), <u>116</u>, 581
       tion and characterization (rabbit
      reticulocytes), 114, 1089
                                                 Phosphorylation
  interconversion, modulator protein
                                                   2'-nor-2'-deoxyguanosine and acy-
```

inhibitors (hamster, rat lung), clovir in tissue culture (rabbit kidney), 116, 360 110, 504 reagents for pepsin and other carboxyl -dephosphorylatin mechanism, acetyl-CoA carboxylase regulation (chick proteases, synthesis and properliver), <u>116</u>, 633 ties, 111, 630 fibrinogen α-chain, interferon-Photochemical system enhanced platelet kinase activity riboflavin-light-02, degradation of (human), 117, 350 lignin model compound, lack of glycogen synthase by calmodulinsinglet oxygen involvement, 111, dependent protein kinase, substrate specificity (rabbit Photolabeling, see Photoaffinity liver), 116, 412 labeling insulin receptors Photophosphorylation B-subunit, insulin-stimulated cyclic, induction by illumination of (human monocyte, monocyte-like etioplasts in_vitro and in vivo cell lines), 115, 560 (cucumber cotyledon), 111, 740 precursor, insulin-stimulated (rat liver), 116, 417 Photosynthesis C₄ regulation (Zea mays), 115, 53 reversibility and protein phosphainorganic carbon accumulation as tase activity (rat liver), 117, protein carbamate (Euglena graci-<u>lis</u>), 111, 544 serine residues, insulin effect membrane potential generation and (human hepatoma cells), 116, 1129 respiratory components (Rhodomultisite, τ proteins (rat brain), 115, 212 pseudomonas capsulata), 113, 155 Photosystem I nuclear stress proteins characterdevelopment in plastids greening in ization (rat myoblasts), 117, 682 plasma membrane glycoprotein, adriavitro, in vivo comparison (cucumber cotyledons), 111, 740 mycin resistance regulation initial electrochromic absorbance (Chinese hamster lung cells), 115, 159 rise generation, inhibition by antimycin I (pea chloroplasts), pyruvate kinase type Mo (intact <u>111</u>, 619 chicken liver), 115, 409 Photosystem II tyrosine, 12-0-tetradecanoyl-phorbolelectron transport photoactivation, Ca²⁺ effect (dark-grown <u>Picea</u> 13-acetate effect (chicken embryo fibroblasts), <u>115</u>, 536 abies chloroplasts), 116, 803 Phosphotransferase ferredoxin photoreduction, enhanced hygromycin B, encoding gene, molecusensitivity to plastoquinone inlar cloning and expression in hibitors (inside-out spinach Streptomyces lividans (S. chloroplast vesicles), 115, 722 hygroscopicus), 117, 6 inside-out thylakoid vesicles, Mn²⁺ removal by EDTA, effect on oxygen Phosphotyrosine evolution (pea chloroplasts), in membranes of murine erythroleukemia cells, increase by 110, 545 oxygen evolution in thylakoid dimethyl sulfoxide, 112, 413 particles, reversible inhibition Photoaffinity labeling by NaCl washing, 23,000-dalton a₁-adrenergic receptors by 4₁amino-6,7-dimethoxy-2[4-[5(3-[¹²⁵I]protein role, 113, 738 Phytochrome iodo-4-azidophenyl)pentanoyl]-1-pi effect on Ca transport in plasma perazinyl]-quinazoline (rat cerebral cortex), 115, membrane (wheat protoplasts), 113, 171 dopamine-8-hydroxylase by bleo-Phytohemagglutinins mycin, <u>112</u>, 273 erythrocyte membranes with 12-(4-azido induced lymphocyte proliferation. 2-nitrophenoxy)stearoyl-(1-140)nicotinamide or 3-aminobenzamide glucosamine, staphylococcal effects (human), 116, 428 a-toxin detection (rabbit), 111, and teleocidin, induction of inter-444 feron γ and interferon δ promammalian s-adrenergic receptors, duction by lymphocytes (human heterogeneity changes by protease blood), 111, 498

```
Pisatin
  accumulation increase by tomato
                                                        liver), 116, 91
                                                 Plasmids
       proteinase inhibitor-inducing
       factor and chitosans (pea pods),
       110, 194
Pituitary tumor GH3, Ca<sup>2+</sup> binding site assay, <u>111</u>,
                                                        117, 835
  MtTF4, growth inhibition by
      estradiol in vivo, effect on
       poly(A)-rich RNA translational
       activities (rat), 113, 462
Plantacyanin
  Cu-surrounding, NMR spectra (cu-cumber), 117, 385
Plasma
  C-peptidase immunoreactivity,
       increase by trypsin treatment in
                                                        783
       vitro (human), 111, 785
                                                   pBR322
  fasting and postheparin, rat
       chylomicron retinol and retinyl
       ester transfer in vitro (human),
       <u>115</u>, 958
  hypertension-associated protein in
       patients with essential hyper-
       tension, 111, 1015
  normal and uremic, ionophorous
      fraction, partial purification (human), \underline{111}, 326
  platelet-rich, protein kinase
                                                        <u>111</u>, 939
       precipitation at pH 5, role in
       blood coagulation (human), 113,
       370
  thrombin activity, protein modulator
                                                        cells, 110, 593
       (human), <u>116</u>, 189
  thromboxane B2, Ca ionophore-
       induced increase, suppression by
       oral imidazo[1,5-<u>a</u>]pyridine-5-
       hexanoic acid (rat), 112, 899
  T-kinin liberation by trypsin treat-
  ment (rat), \underline{112}, 701 vitellogenins I and II, differential
       responsiveness during primary and
       secondary estrogen stimulation
       (chicken), <u>112</u>, 1049
Plasma membranes
                                                        HMG2, 112, 547
  alteration (murine drug-resistant
                                                 Plasminogen activator
       tumor cells), <u>114</u>, 969
  diphenylhexatriene fluorescence
       polarization, differentiation in-
       ducer effects (murine Friend
       leukemia cells), 117, 294
                                                 Plastids
   insulin receptors (rat liver), 114,
  phospholipase C activity (lapine
       synovial cells), 115, 331
  redox activity, adriamycin effect
       (simian virus-transformed liver,
                                                 Plastocyanin
       hepatoma cells), <u>116</u>, 210
   skeletal framework, DNA polymerase
                                                        adduct, preparation with water-
       activity (rat hepatoma), 114, 571
                                                        soluble carbodiimide (spinach,
```

```
bilization (bovine kidney, rat
DNA, two-step gradient purification
    procedure (Escherichia coli),
high-molecular-weight, spontaneous
    loss connected with biocidal po-
    tency decrease and acrystal-
    liferous variant appearance
    (Bacillus thuringiensis var.
    israeliensis), 110, 477
pAGO, from Escherichia coli strain
    containing herpes simplex virus
    gene for thymidine kinase, gene
    transfer to murine cells enhanced
    by verapamil and diltiazem, 110,
  containing cDNA synthesized
    from total rat prostate poly(A)-
    RNA, colony hybridization selec-
    tion (Escherichia coli), 111, 624
  DNA interaction with metabolically
    activated carcinogen causing
    positive supercoiling and slower
    spontaneous relaxation, 114, 14
pKG2, coding for enzyme synthesis in
    polycyclic aromatic hydrocarbon
    degradation (Beijerinckia sp.),
pSV2gpt and pNEO3, carrier DNA-free
    transformation of Chinese hamster
pUB110, cloning of α-amylase gene
    from Bacillus subtilis, 112, 678
recombinant coding for accumulatin of
    B-galactosidase or X90 promoter,
    cell bouyant density increase
(Escherichia coli), 111, 104 supercoiled, containing 5' portion
    and flanking sequences of human
    B-globin gene, nuclease S1 sensi-
    tivity and protection by high-
    mobility-group proteins HMG1 and
tissue-type, inhibition by condi-
    tioned medium from cultured
    vascular endothelial cells (hu-
    man, porcine), 110, 392
from etiolated cotyledons, photo-
    synthetic membrane induction by
    illumination in vitro, in vivo
    greening comparison (cucumber), 111, 740
-cytochrome f covalently linked
```

turnip), 116, 1000

vasopressin-receptor complex, solu-

```
Plastoquinone
                                                           effect (human), 117, 663
  inhibitors, enhanced sensitivity to
                                                      diadenosine 5',5'''-p1,p3-tri-
       ferredoxin photoreduction by pho-
                                                          phosphate, identification (human), 115, 253
       tosystem II (inside-out spinach
       chloroplast vesicles), 115, 722
                                                      diglyceride lipase activity, RHC 80267 effect (human), 116, 68
Platelet-activating factor
  in amniotic fluid, newborn and adult urine (human), 113, 51
  arachidonic acid release in neutro-
       phils stimulated by ionophore
       A23187 (rabbit), <u>113</u>, 72
  conversion to metabolite independent
       from platelet aggregation (rab-
       bit), 110, 890
  inactivation by plasma acetylhydro-
       lase with higher activity in
       hypertension (rat), 113, 666
  neutrophil degranulation, potenti-
                                                           110, 890
       ation by 5-L-hydroxy-6,8,11,14-
       eicosatetraenoic acid (human),
       111, 1
Platelet-derived growth factor effect on tRNAlys modifications
                                                           (rat), <u>117</u>, 183
       (BALB/C 3T3 cells), <u>115</u>, 598
  induction of aortic smooth muscle
       cell migration, role of lipoxy-
       genase arachidonic acid products
        (rat), <u>112</u>, 866

    like growth factor, synthesis,

       homology with simian sarcoma
       virus transforming protein (human
       glioma, sarcoma cells), 117, 176
                                                           228
  -stimulated intracellular pH increase
                                                      thrombin-activated
       (Swiss 3T3 cells), <u>116</u>, 931
   thrombin-released and freeze-thawed
       outdated concentrates, comparison
       (human), 116, 809
                                                           man), <u>112</u>, 693
  a2-adrenergic receptor, size deter-
       mination (human), 116, 1070
  aggregation
                                                           241
     ADP-stimulated, inhibition by
       4,4'-diisothiocyanostilbene-2,2'
       sulfonate (bovine), 111, 306
phosphatidylinositol-4,5-bisphos-
phate labeling with [32P]phos-
         phate (rabbit), 113, 483
     by collagen from placenta of
       diabetic and normal subjects,
       collagen nonenzymatic
                                                           513
       glycosylation, 111, 602
    prostaglandin H2-induced, stereo-
specific inhibition by arachi-
                                                   Platinum
       donic acid lipoxygenase products
    (human), 112, 878
thrombin- or A23187-induced, inhi-
       bition by fibronection (human),
       116, 135
  cytoplasmic free Ca<sup>2+</sup> concentra-
       tion, 9,11-epithio-11,
       12-methano-thromboxane A2
```

```
function, docosahexaenoic acid effect
       (human), <u>117</u>, 549
   imidazo[1,5-a]pyridine-5-hexanoic
       acid-induced thromboxane B2 de-
       crease and prostaglandin E2 in-
       crease (human), 112, 899
  phosphoinositide metabolism, thrombin
  effects (human), \underline{110}, 108 platelet-activating factor conversion
       to metabolite independent from
       induced aggregation (rabbit),
  selenium deficient, 12-hydroperoxy-
       tetraenoic acid formation,
       glutathione peroxidase and
       lipoxygenase pathway coupling
   serotonin secretion, synergistic
       functions of 12-0-tetradecanoyl-
       phorbol-13-acetate and ionophore
       A23187 (human), 112, 778
  74,000-dalton protein isolation from
       solubilized membranes, inhibitory
       action on thrombin binding and
       serotonin secretion (human), 112,
    cAMP inhibitory effects on serotonin secretion, Ca<sup>2+</sup> up-
       take, and phospholipase A2 (hu-
     arachidonic acid release and
       diglyceride/monoglyceride lipase
       pathway inhibition (human), 113,
     cytoplasmic Ca<sup>2+</sup> increase,
       inhibition by cAMP production
       stimulators (human), 113, 598
     polyphosphoinositide increase with
       release of N-acetyl-B-D-glucosa-
       minidase (human), 110, 660
     triphosphoinositide breakdown and
       dense body release (human), 116,
  -containing compounds, inhibitory effects on DNA synthesis in leu-
      kemia cells (L1210), 112, 555
Polyacrylamaide gel electrophoresis
  <sup>3</sup>H-labeled proteins and RNAs, dis-
      tribution pattern recording by
      Linear Analyzer, <u>113</u>, 703
  nondenaturating with dithiothreitol,
      1α,25-dihydroxyvitamin D<sub>3</sub>
```

```
receptor second peak detection,
                                                       \beta(1>4)N-acetylglucosamine (Ba-
      11<u>3</u>, 687
                                                      cillus coagulans cell wall), 111,
Polyadenylation
                                                       312
  mRNA, inhibition by gonadotropin-
                                                Poly-L-glutamic acid
      releasing hormone (rat prostate),
                                                  in Mg^{2+}, Ca^{2+}-dependent DNA
      <u>115</u>, 451
                                                       unwinding (porcine thymus), 116,
Poly(ADP-ribose)
  size and branching shape (calf thymus), 112, 102
                                                Polylysine
                                                  latent phosphoprotein phosphatase
  synthesis inhibition by specific
                                                       activity modulation (bovine
      inhibitors, chondrocyte differen-
                                                       aortic smooth muscle), 117, 493
      tiation enhancement in limb bud
                                                Poly(L-lysine)
      cell culture (chicken), 111, 750
                                                  colchicine-tubulin binding
Poly(ADP-ribose) polymerase
                                                       enhancement <u>113</u>, 384
  role in phytohemagglutinin-induced
                                                Polymyzin B
      lymphocyte proliferation, inhibition by nicotinamide or 3-amino-
                                                   two-dimensional single quantum
                                                       correlation, two-dimensional
      benzamide (human), 116, 428
                                                       double quantum NMR spectra, 117,
Polyamines
                                                       486
  biosynthesis inhibition
                                                Polynucleotides
    by antimetabolites, differentiation
                                                  poly(dG-dC) \cdot poly(dG-dC), B and Z
      induction in melanoma cells
                                                       forms, alkylation by dimethyl-
      (murine Cloudman S91), 113, 18
                                                       sulfate or methylnitrosourea,
    resulting in blockage of B-D-
                                                       methylation by DNA (cytosine-5-)-
      glucuronidase urinary secretion
                                                       methyltransferase, 116, 682
       (mouse), 112, 770
                                                  synthetic, binding of metabolically
  depletion, inhibition of cellular
                                                       activated carcinogen (±)-7r,8t-
      differentiation (equine L6 myo-
                                                       dihydroxy-7,8,9,10-tetrahydrobenzo-
      blast), 114, 944
                                                       [a]pyrene, base sequence selectiv-
  metabolism in lungs, stimulation by oxygen toxicity (rat), 113, 491
                                                       ity, <u>114</u>, 8
                                                Polyoxotungstates
  oxidized, cell sensitivity, role in
                                                  structure, relationship to DNA
       glucocorticoid-induced cytostatic
                                                       polymerase inhibition
      and cytolethal responses (human
                                                       (Escherichia coli), 116, 223
  lymphoid cells), <u>115</u>, 737 stimulation of cAMP-independent
                                                Polypeptides
      protein kinases, similarity to
                                                  α-factor, high-molecular-weight
                                                       precursor biosynthesis (Saccharo-
      Co(III) hexaammine effect (rat
liver, prostate), 112, 139 Poly(A)-poly(dA)
                                                  myces cerevisiae), 116, 822 antigenic of Sm and RNP antigens,
  homopolymer, primer RNA removal by embryo ribonuclease H (chicken),
                                                       purification and identification
                                                       (goat liver), 114, 564
                                                  cytosolic, from hepatocyte nodules
      110, 470
                                                       generated during liver carcino-
Poly[d(A-T)]
                                                       genesis, electrophoretic pattern
  binding of lac repressor headpiece,
                                                       (rat), <u>1</u>17, 740
       thermal denaturation (Escherichia
                                                  low-molecular-weight in lens nuclei
      <u>coli</u>), <u>110</u>, 169
                                                       during cataract development (hu-
Polydeoxyribonucleotide synthetase
                                                      man), 113, 65
  activity in fibroblast and lymphocyte
                                                  pancreatic, crystallization (bovine),
       crude extracts (Chinese hamster
                                                       116, 830
      ovary, human), 116, 657
                                                  proline-rich, see Proline-rich pro-
  T4, stimulation by spermidine and
                                                      teins
       spermine (Escherichia coli NM
                                                  prostate-specific coding by andros-
                                                       terone-dependent mRNA (rat), 111,
       989), 117, 217
Polyethylene glycol
                                                  soybean-derived, pseudo-inhibition of
  elastase amino group modification,
                                                      neutrophil superoxide production
       inhibitory effect on anti-elas-
       tase serum activity and binding
                                                       (human), 11<u>7</u>, 22
       (porcine pancreas), 111, 659
                                                Polyphemin
                                                  teichoic acid-binding lectin,
Poly(galactosylglycerol phosphate)
  linkage to peptidoglycan by glucosyl-
                                                       isolation and characterization
```

(horseshoe crab serum), 113, 611 transferase in liver and lung (C57B1 and DBA/2 mice), 112, 313 Polyphosphoinositides Pregnenolone synthesis phosphodiesteratic breakdown, product mitochondrial, sterol carrier identification (guinea pig synapprotein_-stimulated (rat adretic membranes), 112, 919 nal, hepatic, ovarian cytosol). in platelets, increase after thrombin 117, 702 stimulation, role in aggregation (human), 110, 660 Pre-phenoloxidase Polyprenol activation by bacterial cell walls or s-1,3-glucans (silkworm hemolymph plasma), 113, 562 and pyrophosphate, monophosphate, and fatty acid esters, biosynthesis by soil bacteria grown on meva-Preproenkephalin B lonate, <u>110</u>, 187 -derived endogenous opioid peptide, **Polyribosomes** characterization (porcine pituitary), 117, 695 nuclear transcription in preblastoderm embryos (Drosophila Proapolipoprotein A I melanogaster), <u>112</u>, 851 isolation and amino acid sequence, Polysaccharides comparison with mature apoliposulfated, and α₁-proteinase inhibprotein A I (human plasma), 113, itor, effect on \underline{m}_{B} -acrosin 626 activity, 117, 319 in Tangier disease, isolation and amino acid sequence (human plas-Polysialosyl glycopeptides ma), 113, 934 structural similarity of brain cell Proenkephalin surface protein (BSP-2) and -derived non-opioid peptide, amino neural cell adhesion molecule acid sequence (bovine adrena) (N-CAM) (murine brain), <u>112</u>, 482 gland), <u>113</u>, 229 Polysomes, <u>see</u> Polyribosomes Progesterone Porphyrins metabolism in adrenal microsomes biosynthesis in animals and plants, (porcine), 111, 512 4,5-dioxovalerate precursor, 112, prolonged administration, uteroglobin 986 synthesis regulation, progessynthetic, disproportionation and terone and estrogen receptor conrecombination in matrix, fast servation (immature rabbit atom bombardment mass spectromuterus), 115, 1015 etry 111, 478 Progesterone receptors Postribosomal particles conservation during prolonged hepatic, isolation and detection of progesterone administration (imserum albumin mRNA and protein mature rabbit uterus), 115, 1015 molybdate and urea effects (chick factors required for translation (rabbit), <u>113</u>, 868 oviduct), 114, 479 Potassium ion protein kinase activity of purified binding to elastase-inactivated components (chicken oviduct), carbamoyl-phosphate synthetase 113, 960 (ammonia) (rat liver), <u>117</u>, 238 Progestin PPi:fructose 6-phosphate phosphotransferase, <u>see</u> Pyrophos-phate-fructose-6-phosphate 1production by luteal cells, estradiol deprivation effect, accumulation phosphotransferase of cholesterol and cholesterol Praseodymium ion esters (pseudopregnant rabbit), 113, 1026 transport, enhancement by lasalocid Proinsulin and synthetic crown ether carboxylic acid, 117, 340 protonated molecular species, Prealbumin detection by fast atom bombardpurificiaton, peptide identification, ment mass spectrometry (human), and amino acid sequence (human <u>11</u>0, 753 Prolactin amyloid fibril), 114, 657 Pregnancy α-lactalbumin induction, selective enhancement by epidermal growth

factor (rat mammary explant).

117, 524

endogenous induction of epoxide

hydrolase, benzo[a]-pyrene

hydroxylase, and glutathione

Prophages

Subject Index

ovine

binding to rabbit mammary membrane	induction in <u>Vibrio cholera</u> by
receptor, pH-dependent dissocia-	furazolidone treatment, 112, 1106
tion of complex, <u>111</u> , 224 infusion, prolactin receptor	Propranolol
down-regulation (female virgin	inhibition of cholesterol ester synthesis (human fibroblasts),
rat liver, mammary gland, kid-	112, 795
ney), 116, 644	stimulation of cholesterol synthesis
requirement for casein mRNA accu-	(human fibroblasts), 112, 795
mulation (rat), 116, 994	Propylthiouracil
secretion by pituitary adenomatous	effect on neurotensin content in
cells, inhibition by dopamine	pituitary and hypothalamus in
(human), <u>112</u> , 42	vivo (rat), 113, 248
synthetic analog, 13 amino acid,	Prostacyclin
radioimmunoassay (human), <u>115</u> , 346	biosynthesis
Prolactin receptors	leukotrene C4-stimulated, agonist-
down-regulation by ovine prolactin or	specific desensitization (human
human growth hormone infusions	endothelial cells), <u>117</u> , 780
(female virgin rat kidney, liver,	vascular, extracellular ADP- and
mammary gland), <u>116</u> , 644	ATP-stimulated (rabbit aorta,
rabbit mammary, complex with ovine	pulmonary artery; rat aorta),
prolactin, pH-dependent dissocia-	<u>112</u> , 284
tion, <u>111</u> , 224	Prostaglandin D ₂
stimulation in vitro by aliphatic	adenylate cyclase stimulation, effect on cytoplasmic Ca ²⁺ decrease in
alcohol-induced membrane fluidi-	on cytoplasmic Ca ²⁺ decrease in
zation (rat ventral prostate),	thrombin-activated platelets (hu-
113, 220 Pugging and apport idage	man), <u>113</u> , 598 Prostaglandi n E 1
Proline endopeptidase neurotensin degradation (rabbit	adenylate cyclase stimulation, effect
brain), <u>116</u> , 1151	on cytoplasmic Ca ²⁺ decrease in
Proline-rich proteins	thrombin-activated platelets (hu-
bound to prostatic binding protein,	man), 113, 598
multiple forms (rat), 111, 172	inhibition of
synthesis in vitro during mRNA	neutrophil superoxide radical
translation from submandibular	production activated by formyl-
gland (human), $\underline{111}$, 239	methionyl-leucylphenylala-
Promegestone	nine (human), <u>113</u> , 506
localization in chromatin fraction of	tumor promoter-induced inter-
nuclei (cultured hepatoma cells),	leukin 2 producton by thymo-
<u>110</u> , 719	cytes (mouse), <u>114</u> , 93
Promethazine	Prostaglandin E ₂
inhibition of synexin activity and	in intact platelets, accumulation
cromaffin granule exocytosis	induction by imidazo[1,5- \underline{a}]-
(bovine adrenal medulla), 113, 908	pyridine-5-hexanoic acid (human),
Promyelocytic leukemia cells (HL60) differentiation induced by retinoic	112, 899
acid and phorbolester, glycosyl-	production, stimulation by fetal and
transferase activity increase	adult urine substances (human am-
(human), 110, 348; erratum, 111,	nion cells), <u>114</u> , 1056 reversal of corti sol inhibitory
775	α effect on α -lactalbumin synthesis
la,25-dihydroxyvitamin D3-induced	(murine mammary explants), 111,
differentiation into monocyte-	1059
macrophages (human), 117, 86	selective binding sites on peritoneal
maturation induced by 2-β-D-	macrophages (rat), <u>114</u> , 155
ribofuranosylselenazole-4-carboxa-	synthesis from arachidonic acid in
mide (human), 115, 971	erythrocytes (0 psanus tau), 110 ,
Pronase	250 12-0-tetradocanovinhorbol 13 acotato
thermophilic cytochrome oxidase	12- <u>0</u> -tetradecanoylphorbol-13-acetate- induced release from 3T3 rat cell
proteolysis, effect on proton-	variants with loss of mitogenic
pumping and oxidase activities, 113, 575	response, 111, 194
113, 3/3	, coponer, <u>xxx</u> , xxx

Protease inhibitors

1983 Cumulative

Prostaglandin F2

113, 108

Subject Index

```
effects on p-adrenergic receptor
  reversal of cortisol inhibitory
                                                        heterogeneity in lung membranes
       effect on α-lactalbumin synthesis
                                                         (hamster, rat), 110, 504
       (murine mammary explants), 111,
                                                  Proteases
       1059
Prostaglandin F2a effect on insulin-stimulated protein
                                                    acid, vasoactive peptide generation
                                                         from rat plasma kininogen (rodent
       synthesis (rabbit muscle), 116,
                                                        Murphy-Sturm lymphosarcoma), 112,
       1084
                                                        621
                                                    Ca^{2+}-activated, effect on spectrin
  stimulation of phosphatidic acid-
       phosphatidylinositol turnover
                                                         and band 3 protein (rat erythro-
       (rat luteal cells), 116, 39
                                                         cyte membrane), 117, 372
                                                    contaminating activity in spinach
  synthesis from arachidonic acid in
                                                        leaves, role in ferredoxin-NADP reductase molecular
       erythrocytes (Opsanus tau), 110,
       250
                                                        heterogeneity, 110, 280
  12-0-tetradecanoylphorbol-13-acetate-
                                                    H4, -activated protein kinase,
       induced release from 3T3 rat cell
                                                         isolation and characterization
       variants with loss of mitogenic
                                                         (murine lymphosarcoma cells),
       response, <u>111</u>, 194
                                                        116, 675
Prostaglandin H2
                                                    insect serine endopeptidase, amino
  platelet aggregation induction,
                                                         acid sequence, comparison with
       stereospecific inhibition by
                                                         bovine chemotrypsin (Vespa orien-
       arachidonic acid lipogenase prod-
       ucts (human), 112, 878
                                                         talis larvae), 110, 1
                                                    insulin, see Insulin protease
Prostaglandin H synthase
                                                    low-Ca-requiring form, purifi-
  mediation of carcinogenic arylamine
                                                        cation and characterization (por-
       reaction with tRNA and homopoly-
                                                         cine cardiac muscle), 111, 700
       ribonucleotides (ovine seminal
                                                    lymphocyte, strain-related activity
       vesicle microsomes), 111, 96
                                                    (murine cell surface), \frac{114}{600}, \frac{600}{600}, \frac{114}{600}
Prostaglandin I_2
  inhibition of neutrophil superoxide
                                                    ing and clearance (murine peritoneal macrophages), 114, 757 neutral, Ca<sup>2+</sup>-activated, proteo-
       radical production activated by
       formyl-methionyl-leucyl-phenyl-
       alanine (human), 113, 506
                                                         lysis of epidermal growth factor
  selective binding sites on peritoneal
                                                         receptor (rat hepatic membrane),
       macrophages (rat), 114, 155
                                                         113, 255
Prostaglandins
                                                    Staphylococcus aureus V-8, inactivation of synexin, 112, 147
  concentration changes during endo-
       chondral bone differentiation
                                                  Proteinase inhibitor-inducing factor
       (rat tissue), 117, 746
                                                     stimulation of pisatin synthesis in
  and interferon, antiviral action
                                                         pea pods (tomato leaves), 110, 194
        (virus-infected murine cells),
                                                  a1-Proteinase inhibitor
       116, 442
                                                     and sulfated polysaccharides, effect
  phospholipase A_2 modulation (snake venom), \underline{115}, 94
                                                         on \underline{m}_{8}-acrosin activity (human),
  production by A23187-stimulated
                                                         117, 319
       macrophages, inhibition by tri-
                                                  Proteinase inhibitors
       fluoperazine and verapamil (rat),
                                                    heat-stable, low-molecular-weight for
       114, 248
                                                         lysosomal cysteine proteinases,
Prostaglandin synthase
                                                         inhibition of cathepsins B and H
   inhibition by lecanoric acid analogs
                                                         (human serum), 110, 449
       (ovine seminal vesicles), 110, 733
                                                    synthesis, stimulation by proteinase
Prostatic binding protein
                                                         inhibitor-inducing factor and
                                                         chitosans (tomato leaves), 110,
  amino acid sequence homology with
  rabbit uterglobin (rat), 114, 325 binding to multiple forms of proline-
                                                  Proteinases
                                                    Ca+2-activated, vimentin degrada-
tion (calf lens), 116, 204
lysosomal cysteine, inhibition by
human serum inhibitor, 110, 449
       rich polypeptide (rat), <u>111</u>, 172
α<sub>1</sub>-Proteinase inhibitor
   effect on nerve growth factor and
       kallikrein amidolytic activities,
```

neutral, active against collagen type

I C-terminal crosslinking region

homogenate), 112, 132

phosphorylation stimulation of

```
(human gingival fibroblasts),
       114, 1064
                                                          fructose-1,6-bisphosphatase in
Protein carbamate
                                                          <u>vitro</u> (yeast), <u>115</u>, 317
  inorganic carbon accumulation during
                                                        Type I regulatory subunit
       photosynthesis (Euglena graci-
                                                          isozyme, detection within Type II
       <u>lis</u>), <u>111</u>, 544
                                                             isozyme chromatographic peak
Protein carboxymethyltransferase, see
                                                             (murine epididymal fat), 112,
       Protein O-methyltransferase
                                                             214
Protein-disulfide reductase (gluta-
                                                          streptozotocin-induced diabetes
       thione)
                                                             effect on cAMP binding activity
  in cultured fibroblasts,
                                                             (rat liver), 117, 794
       dependence on fetal calf serum
                                                      cAMP-independent
       and insulin (human skin), 111, 872
                                                        polymine-like effects of Co(III)
  hepatic latent and nonlatent
                                                          hexaammine (rat liver, prostate),
       activity during perinatal
                                                          112, 139
       development and liver regeneration
                                                        purification and characterization
       (rat), 1<u>1</u>6, 909
                                                          (AH-66 rat hepatoma cells), 113,
Protein HC
  neutral microprotein, isolation and characterization (guinea pig, human, rabbit), <u>117</u>, 202
                                                        SPK 380, histidine residue rever-
                                                          sible self-phosphorylation (bo-
                                                          vine adrenal cortex), 112, 884
Protein kinase
                                                        tightly bound to DNA, character-
  activation by Ca/phospholipid or H4
                                                          ization (rat liver nuclei), 117,
       protease, isolation and charac-
                                                          610
       terization (murine lymphosarcoma
                                                      cGMP-dependent
       cells), 116, 675
                                                        from bovine lung, phosphorylation
  activity
                                                          of high-mobility-group protein
     in platelets, interferon-
                                                          (calf thymus), 110, 378
       enhanced, fibrinogen \alpha-chain phosphorylation (human), \underline{117}, 350
                                                        stimulation of Na<sup>+</sup>,K<sup>+</sup>-ATPase
    of progesterone receptor puri-
                                                          (hamster sperm homogenate), 112,
       fied components (chicken ovi-
       duct), 113, 960
                                                      phospholipid-dependent, inhibition by
  ATP-citrate Tyase, acetyl CoA
                                                          quercetin (murine brain cytosol),
       carboxylase phosphorylation (rat
                                                          117, 444
       adipose, liver), <u>117</u>, 435
                                                      phospholipid-sensitive Ca<sup>2+</sup>-dependent
  Ca-dependent, inhibition by quercetin
                                                        high activity in neutrophil
  (murine brain cytosol), 117, 444 Ca<sup>2+</sup>/phospholipid-dependent activ-
                                                          particulate fraction (human), 111, 847
       ity, correlation with cell proliferation in Ca<sup>2+</sup>-deficient
                                                        stimulation by 12-0-tetradecanoyl-
                                                          phorbol-13-acetate, effect on
       medium (rat liver), 115, 383
                                                          serotonin release (human plate-
  calmodulin-dependent
                                                          lets), 112, 778
     glycogen synthase phosphorylation,
                                                      precipitating from platelet-rich
       substrate specificity (rabbit
                                                          plasma at pH 5, role in blood co-
       liver), <u>116</u>, 412
                                                          agulation (human), 113, 370
    microtubule disassembly with ATP and Ca<sup>2+</sup> (rat brain), <u>110</u>, 287
                                                      	au protein multisite phosphorylation
                                                           (rat brain), 115, 212
  cAMP-dependent
                                                      stimulation of topoisomerase I iso-
     acetyl CoA carboxylase phosphor-
                                                          lated from Novikoff hepatoma,
       ylation (rat adipose tissue,
                                                          111, 897
       liver), <u>117</u>, 435
                                                      12-0-tetradecanoyIphorbol-13-acetate
-activated, Ca<sup>2+</sup>- and phospho-
     activation by forskolin in parotid
       cells (mouse), <u>111</u>, 21
                                                           lipid-dependent, retinal inhibi-
    catalytic unit
                                                          tion, 114, 1194
       autophosphorylation, stimula-
                                                      tyrosine
         tion by acidic phospholipids
                                                        -specific, activity in purified
         and sodium dodecyl sulfate
       (bovine heart), 113, 916 inhibitory effect on Na<sup>+</sup>, K<sup>+</sup>-
                                                           Leydig cells (rat), 116, 400
                                                        in T lymphoma cells (human), 117,
         ATPase (hamster sperm
```

```
Protein kinase C
  inhibition by histones H3 and H4 (rat
       brain), <u>115</u>, 1027
  role in signal-induced lysosomal
       enzyme release (rabbit platelets, rat neutrophils), 116, 743
Protein O-methyltransferase
  in crude lens extracts, character-
ization (bovine), <u>113</u>, 418
  separation from phenylethanolamine
       N-methyltransferase (bovine adre-
       nal medulla), 112, 1061
Protein phosphatase, see Phosphoprotein
       phosphatase
Proteins
  acidic
     5'-terminal sequence, inter-
       action with 18-S rRNA (murine
       whey), 116, 167
     glial fibrillary, isolation
       and purification (bovine brain),
       115, 58; erratum, 791
  actin polymerization stimulator, iso-
       lation and purification (bovine
       thyroid plasma membrane), 111, 415
  adenovirus type 2, trimeric nature
       of penton base and fiber, 110, 913
  amyloid prealbumin variant, identifi-
       cation (amyloidotic polyneuro-
       pathy patient kidney), 116, 880
  antiphospholipase, glucocorticoid-
       induced, characterization (rat), 117, 878
  ATPase inhibitor, see ATPase inhi-
       bitor protein
  band 3, degradation by Ca<sup>2+</sup>-acti-
       vated protease (rat erythrocyte
       membrane), <u>117</u>, 372
  benzodiazepine receptor, develop-
       mental changes, carboxylmethyla-
       tion role (rat brain), 116, 1056
  binding enterotoxin of <u>Clostridium</u>
       perfringens, isolation and iden-
       tification (rabbit brush-border
  Ca<sup>2+</sup>-dependent in erythrocyte
      cytoplasm, increase of membrane Na<sup>2</sup>+K<sup>+</sup>-ATPase sensitivity to Ca<sup>2</sup>+ inhibition (human), <u>111</u>,
       970
  calmodulin-binding, see Calmodulin-
       binding proteins
  y-carboxyglutamic acid-containing,
       purificationtion from demin-
       eralized organic bone matrix (bovine), 117, 765
  chromatin, see Chromatin proteins chromosomal, -DNA crosslinking by uv,
 radiation, and antitumor drugs (HeLa cells), <u>114</u>, 767 coat of bacteriophage M13 (B pro-
       tein), different conformation in
```

```
filaments, I-forms, and spher-
    oids, circular dichroism, 112, 349
corticosteroid-binding, intra-
     cellular, ketoconazole binding
     (Candida albicans), 117, 43
cytosolic, inhibition of
    S-adenosyl-L-methionine-mediated
    methylation of phosphatidyl-
    ethanolamine (rat liver), 112, 108
  cytochrome \underline{P}-450\underline{LM}_{A} 12 \alpha-hy-
     droxylase activity (rabbit
     liver), <u>113</u>, 212
  precursor of &-aminolevulinate
     synthase mRNA translation product
     (chicken embryo liver), 110, 23
  synthesized in cell-free system.
     stimulation of protein release
     from isolated mitochondria (rat
    hepatocytes), 113, 199
  12-0-tetradecanoy1phorbol-13-acetate binding, dependence on Ca<sup>2+</sup> and
    phospholipids (murine tissues),
    111, 340
23,000-dalton in photosystem II
    thylakoid particles, role in oxygen evolution, <u>113</u>, 738
74.000-dalton from platelet mem-
    branes, inhibition of thrombin
    binding and serotonin secretion
    in platelets (human), 112, 228
270,000-dalton in tetrodotoxin-
    binding component of Na<sup>+</sup> chan-
    nel, affinity labeling in cross-
     linking study (Electrophorus
    electricus electroplax), 114, 126
deinhibitor, role in interconversion
    of ATP- and Mg-dependent protein
    phostatase (canine liver), \underline{116}, 349
DNA-binding, see DNA-binding proteins
electron transport, alloxan reduction
    (porcine liver microsomes), 114,
epididymal and seminal, radioimmuno-
    assay and radioreceptor assay
    (canine, guinea pig, hamster,
human, rabbit, rat), <u>114</u>, 653 factor X coagulant, <u>see</u> Factor X
    coagulant proteins
fiber type IIM-specific in jaw-closer
    muscles, identification (feline),
    <u>113</u>, 519
heat-labile inhibitor of protein
    phosphatase (rabbit skeletal
    muscle), 113, 439
helix-destabilizing, isolation from
    herpes simplex virus type 1-in-
    fected cells (hamster kidney).
    116, 327
high-mobility-group, see High-
    mobility-group proteins
```

```
<sup>3</sup>H-labeled, distribution pattern,
    113, 703
hypertension-associated, isolation
    from plasma (essential hyper-
    tension patients), 111, 1015
iron-sulfur, see Iron-sulfur proteins
λ hypothetical and tail-fiber.
    sequence homology (bacteriophage
    T4), <u>115</u>, 1061
lysosomal enzyme-binding, isolation
    by phosphomannan-Sepharose (Maca-
    ca radiata brain), 112, 398
membrane
  ADP-ribosylation by pertussis toxin
    (bovine brain), <u>115</u>, 325
  epidermal growth factor-dependent
    phosphorylation in Rous sarcoma
    virus-transformed cells (rat).
    113, 678
  in inside-out thylakoid vesicles,
    removal by EDTA, effect on oxygen
    evolution (pea chloroplasts),
    110, 545
methyl-accepting chemotaxis, serine
    and aspartate chemoreceptors, ion
    channel element selection (Esch-
    erichia coli, Salmonella typhi-
murium), 115, 648
microsomal hepatic, stimulation of
    cytochrome P-450_{LM_d} 12 \alpha-hy-
    droxylase activity (rabbit), \underline{113}, 212
mitochondrial
  inner membrane 30K hydrophobic,
     comparison with subunit 32K of
     cytochrome \underline{b}-\underline{c}_1 complex
     (yeast), <u>110</u>, 945
  release in vitro, stimulation by
     cytosolic proteins synthesized in
     cell-free system (rat hepato-
     cytes), <u>113</u>, 199
modulator, role in phosphoprotein
     phosphatase interconversion
     (rabbit skeletal muscle), <u>115</u>, 871
	au, multisite phosphorylation (rat
     brain), 115, 212
myelin, see Myelin proteins
nafenopin-binding, detection and per-
     oxisome proliferation induction
     (rat liver cytosol), 116, 388
neutral microprotein, isolation from
    protein HC and \alpha_1-microglobu-
    lin, characterization (guinea
pig, human, rabbit), <u>117</u>, 202
nonhistone, ADP-ribosylation in HeLa
    cell cycle, <u>115</u>, 938
nonmetallothionein, and cadmium ac-
    cumulated from aquarium water
     (rainbow trout liver), 110, 584
```

NS of vesicular stomatitis virus,

```
specific non-covalent binding of
    GDP, inhibition by ATP, 114, 138
nuclear, phosphorylation suppression
    by ADP-ribosylation (chicken
    liver), <u>113</u>, 135
2',5'-oligoadenylate synthetase-
    binding, activity, temperature effect (mammalian extracts), 117,
osteocalcin-related, vitamin D-depen-
    dent y-carboxylation (rat femoral
    bone, renal cortex), 113, 294
overproduction in Escherichia coli
    with recombinant plasmids, cell
    bouyant density increase, 111, 104
pancreatic stone, see Pancreatic
    stone proteins
PDC-109 from bovine seminal plasma,
    amino acid sequence, 113, 861
phosphorylation in chromaffin gran-
    ules, role in exocytosis-like in-
    teraction with adrenal medullary
plasma membranes (bovine), \underline{110}, 55 in plastids during greening in vitro
    and in vivo (cucumber cotyledon),
    111,
         740
prostatic binding, see Prostatic
    binding proteins
prostatic steroid-binding, see
    Prostatic binding proteins
proton-proton spin-spin coupling con-
    stants, measurements with two-
    dimensional correlated NMR spec-
    troscopy, 113, 967
pyridoxal phosphate-binding, see
    Pyridoxal phosphate-binding pro-
pyruvate, orthophosphate dikinase
    regulating, isolation and characterization (maize leaves), <u>111</u>,
recombinant-DNA products, primary
    structure, fast atom bombardment
    high field magnetic mass spectrom-
    etry, <u>117</u>, 229
release by skin fibroblasts in cul-
    ture, glycoprotein M<sub>r</sub> 2000,000
    detection (Huntington disease
    patients), <u>111</u>, 690
retinoic acid-binding, intracellular
    detection, HPLC (human cultured
    cell, tumor cytosols), 116, 75
retinol binding, intracellular de-
    tection, HPLC (human cultured
    cell, tumor cytosols), 116, 75
riboflavin-binding, see Riboflavin-
    binding proteins
ribosomal from 50-S subunit, addition
    to 5-S RNA, effect on incorpora-
    tion into 16-S, 23-S RNA complex
    (Escherichia coli), 114, 348
S100, brain-specific, synthesis in
```

```
lines sensitivity decrease to
       colcemid (rat glial cells), 112,
  7-S storage, s-subunit, exogenous
       methionine effect on mRNA forma-
       tion (cultured soybean cotyle-
       dons), <u>117</u>, 658
  S-100b, Zn<sup>2+</sup> binding (human brain),
  114, 1138; erratum, 115, 769 short-lived, [355] methionine-
       labeled, degradation, stimulation
       by amino acids (rat hepatocytes),
       117, 509
  spectrin-like synaptosomal component
       (rat cerebral cortex), 115, 437
  spin system, identification by two-dimensional double quantum ^{\rm I}{\rm H}
       NMR spectroscopy, 113, 854
  sterol-carrier, mitochondrial preg-
       nenolone synthesis stimulation
       (rat adrenal, hepatic, ovarian
  cytosol), 117, 702
stress, 25,000 dalton, phosphory-
       lation pattern (rat myoblasts), 117, 682
  substrates of phospholipid-sensitive
Ca<sup>2+</sup>-dependent protein kinase
       in neutrophil particulate frac-
       tion (human), 111, 847
  sulfhydryl, \sim 23,000-M_r, role in
       high 02 partial pressure-
       activated protein synthesis
       (rabbit reticulocytes), 117, 135
  synaptosome membrane, developmental spin label study (rat brain
       cortex),<u>117</u>, 688
  thrombin-stimulated phosphorylation
     DNA synthesis reinitiation
       hamster fibroblasts), 111, 1034
     and serotonin release (human plate-
       lets), 111, 1034
  thyroid hormone-binding, character-
       ization in brain cytosol primary
       cultures (rat embryos), 116, 901
  transforming, simian sarcoma virus,
       homology with platelet-derived
       growth factor-like growth factor
       (human glioma, sarcoma cells),
       <u>117</u>, 176
  vinculin-binding, high molecular
       weight, electroblot-overlay de-
       tection (various muscle, non-
      muscle tissues), 116, 1026
  vitamin D-binding, carbohydrate
       chain, isolation and characteri-
       zation (human), <u>117</u>, 324
  vitamin K-dependent, warfarin-induced
       accumulation (rat), 114, 991
Protein synthesis
  hemin and allyl isopropyl acetamide
```

colcemid-resistant mutant sub-

```
effects (rat hepatocytes), 114,
  high oxygen partial pressure-acti-
       vated inhibitor, relationship to
       glutathione disulfide-induced
       inhibitor and to \sim 23,000-M<sub>r</sub>-
       sulfyhdryl protein (rabbit reti-
       culocytes), <u>117</u>, 135
  inhibition by
    2',5'-A4 tetramer analog enzy-
       matically synthesized in rabbit
       reticulocyte lysate, 111, 205;
       erratum, 114, 1200
     aminoglycoside antibiotics stimu-
       lating DNA synthesis (Escherichia
       coli), 112, 801
    cycloheximide or purimycin, induc-
       tion of histone mRNA increase in
       exponentially growing and syn-
       chronous G_1 HeLa cells, \underline{114}, 131
    2,4-dinitrofluorobenzene and crea-
       tine phosphokinase (rat quarter
       diaphragm), 111, 884
    D-galactosamine and ethanol, mutual
       potentiation (murine
       hepatocytes), 112, 361
    8-methoxypsoralen with uv ir-
       radiation (L1210 cells), 112, 965
  insulin-stimulated, prostaglandin
  F<sub>2a</sub> (rabbit muscle), <u>116</u>, 1084 initiation complex formation with
       initiation factor, GTP-dependent
stimulation by UTP (Streptomyces
<u>aurefaciens</u>), <u>114</u>, 222
  in nuclease-treated mRNA-dependent
       reticulocyte lysate, inhibition
       by dsRNA-like component of cyto-
       plasmic mRNA from HeLa cells,
       <u>11</u>4, 41
  pituitary, estradiol benzoate-induced
       changes (male rat), 116, 230
Protein synthesis inhibitors
  antigenic determinants (barley,
       rye, wheat), <u>114</u>, 190
Proteoliposomes
  Ca<sup>2+</sup> permeability, <u>S</u>-adenosyl-
      methionine effect (chicken
      erythrocyte membrane proteins),
      114, 1126
ProteoTysis
  ATP-dependent, role in methemoglobin
      reductase solubilization during
      reticulocyte maturation (rabbit),
      116, 357
  S-cyanylation and domain-specific
      antibodies, fibronectin domain
      structure identification (human
      pericellular matrix, plasma).
      <u>116</u>, 534
Prothrombin
  Ca effects on molecular states, re-
```

action with bifunctional alkyla-

```
ting reagents (bovine), 111, 213
                                                    Purple membranes
                                                      mobility characteristics, <sup>13</sup>C, <sup>31</sup>P, and <sup>2</sup>H NMR (<u>Halobacteri</u>-
Prothrombinase
  activity, stimulation by Clostridium
                                                           um halobium), 114, 713
  welchii phospholipase <u>c</u> (human erythrocytes, platelets), 117, 80; kinetic parameters, physical signifi-
                                                    Putrescine
                                                      accumulation, adenosylmethionine de-
carboxylase inhibition by
       cance, 114, 526
                                                           3-deasa-(\pm)aristerimycin (HeLa cells), 114, 505
Proton exchange
  octanol-water, acceleration by non-
steroidal anti-inflammatory
                                                      hyperoxia-induced increase in lungs
drugs, NMR, \underline{113}, 745 Protoporphyrin IX
                                                           (rat), <u>113</u>, 491
                                                      lysine decarboxylase inhibition
                                                           (Escherichia coli induced, non-
  Mg-dependent guanylate cyclase acti-
                                                           induced cells), <u>114</u>, 882;
       vation (rat liver plasma mem-
                                                           erratum, 116, 355
       branes), <u>116</u>, 47
Protoporphyrinogen IX oxidase, see
                                                      microvascular, synthesis, blood-brain
       Protoporphyrinogen oxidase
                                                           barrier breakdown mediation (rat
Protoporphyrinogen oxidase
                                                           cerebral cortex), 116, 1039
  synthesis site and activity factor
                                                    Pyridinoline
       (rat liver), <u>116</u>, 383
                                                       crosslink formation in nonmineralized
Pseudomonas aeruginosa
                                                           bones (chicken), 113, 975
  cytochrome c comparison with Desul-
fovibrio desulfuricans, 113, 519
                                                    Pyridoxamine 5'-phosphate
                                                       aspartate aminotransferase acti-
  DNA gyrase resistance to nalidixic
                                                           vation, inhibitory potential of
       acid, Escherichia coli compari-
                                                           organic and inorganic phos-
       son, 110, 694
                                                           phates and anionic compounds
Pseudomonas putida CR 1-1
                                                            (porcine heart), <u>112</u>, 629
  enzyme catalyzing synthesis of D-
                                                      binding to tryptophan synthase from
       cysteine-related amino acids,
                                                           Escherichia coli, <sup>31</sup>P NMR, 111.
       111, 809
Pseudouridine
                                                    Pyrolysis
  in 5-S RNA, modification with 4-bromo-
                                                      -produced mutagenic and carcinogenic
       methyl-7-methoxycoumarin, melting
                                                           heterocyclic amines, ultimate
       behavior of corresponding segment (yeast), \underline{114}, 81
                                                           forms (Salmonella typhimurium
                                                           TA98/1.8-DNP<sub>6</sub>), 114, 626
Psoralens
                                                    Pyridoxal phosphate-binding proteins
  mono- and bifunctional, oxygen
                                                      in liver and hepatoma cytosolic
       radical formation, role in bio-
                                                           extracts, immunoblot detection (rat), \underline{112}, 61
       logical activities, 112, 638
Pterins
                                                    Pyrimidine
  reduced, tyrosine hydroxylase inacti-
vation (rat), <u>117</u>, 894
                                                      analogs, DNA strand break induction
                                                           (mouse), <u>115</u>, 834
Pterobilin
                                                      -purine residues, alternating sequences, -DNA forming potential
  conversion to sarpedobilin in larvae
       (Papilio sarpedon), 110, 779
                                                           (radish, wheat, nuclear genomes),
Pteroylmonoglutamte
                                                           116, 113
  intestinal transport, cAMP effect
                                                    Pyrophosphate
       (rat jejunum), 115, 756
                                                      glycogen synthesis requlation
Purine
                                                           (<u>Escherichia coli</u>), <u>115</u>, 820
  analogs, DNA strand break induction
                                                    Pyrophosphate-fructose-6-phosphate
       (mouse), 115, 834
                                                           1-phosphotransferase
  nucleotide metabolism, alteration
                                                      activation by fructose 2,6-bisphos-
       during muscle differentiation in
  vitro (rat), 116, 507
-pyrimidine residues, alternating
                                                           phate contaminant in commercial
                                                           fructose 6-phosphate (castor
                                                           bean), 1<u>17</u>, 37
       sequences, DNA forming potential
                                                    Pyrrolidinylnaphthoquinone
       (radish, wheat nuclear genomes),
                                                      formation from 4-chlorobutylamino-
       <u>116</u>, 113
                                                           naphthoquinone (rat hepatocytes),
Puromycin
                                                           112, 356
  inactivation by acetylating enzyme
                                                    Pyruvate
       from Streptomyces alboniger, 113,
                                                      decarboxylation (rat perfused
```

1983 Cumulative Subject Index

skeletal muscle), <u>116</u>, 456 effect on pyruvate, orthophosphate dikinase activation/inactivation by adenylate energy charge (Zea mays chloroplasts), 115, 673 stimulation of growth and attachment of melanoma cells, replacement by ferricyanide in serum-free media (human), 112, 183 Pyruvate dehydrogenase (lipomide) a-subunit phosphorylation, inhibition by dichloroacetate and AMP (rat brain, heart, liver mitochondria), 111, 1054 Pyruvate dehydrogenase activator release by liver particulate fraction, stimulation by insulin (rat), 112, 35 Pyruvate dehydrogenase inhibitor generation by insulin, high fat diet and dexamethasone effects (rat liver), <u>117</u>, 456 Pyruvate kinase activity loss after limited proteolysis with cathepsin B, restoration by fructose 1,6-bisphosphate (rat liver), <u>110</u>, 682 type M₂, phosphorylation (intact chicken liver), <u>115</u>, 409 Pyruvate, orthophosphate dikinase activation/inactivation, control of adenylate energy charge, pyruvate, oxamate, and oxalate effects (Zea mays chloroplasts), 115, 673 dark-Tight regulation by activationinactivation catalyzing protein (maize leaves), 111, 288 regulation by ADP-dependent phosphorylation and dephosphorylation (Zea mays), 115, 53

Q

Quercetin inhibition of Ca- and phospholipid-dependent protein kinases (murine brain cytosol), 117, 444 Quinone-methides from chemical rearrangement of polycyclic aromatic hydrocarbon phenol-epoxide metabolites, 117, 129 Quinuclidinyl benzilate binding to muscarinic acetylcholine receptors regulated by guanine nucleotides, Tris and choline effects (canine, frog, murine, rat heart), 113, 280 Quasi-molecular ions

from neurotoxin, detection by

[12/I]plasma desorption mass spectroscopy (cobra venom), 110, 519 Quinidine inhibition of ADP-stimulated vascular prostacyclin synthesis (rabbit aorta, pulmonary artery, rat aorta), 112, 284 Quinol dehydrogenase catalytic component of NADPHdependent oxidoreductase in stimulated and resting neutrophils (human), 110, 873 Quinuclidinyl benzilate binding to muscarinic receptors inhibition by ATP due to orthovanadate contamination (rat corpus striatum), <u>110</u>, 567 stimulation by monovalent cations and guanide nucleotides, N-ethylmaleimide pretreatment effect (chicken heart), 111, 41; erra-

R

tum, 112, 348

Radicals oxidizing, nafazatrom oxidation, ESR and pulse radiolysis, 115, 800 Radioimmunoassay epididymal and seminal proteins (canine, guinea pig, hamster, human, rabbit, rat), 114, 653 leukotrienes (guinea pig Tung), 117, 574 salivary gland glucagon as fictitious substance due to tracer-degrading activity resistant to protease inhibitors (rat), 113, 340 Radioiodination glycoproteins, inhibitory effect on binding to immobilized lectins, 110, 103 thyroglobulin in vivo and in vitro, effect on amino acid sequence around tyrosine residue in Nterminal region (human), 114, 73 Radioreceptor assay epididymal and seminal proteins (canine, guinea pig, hamster, human, rabbit, rat), $\underline{114}$, 653 Raman spectroscopy electron transfer flavoprotein dehydrogenase structure (porcine hepatic mitochondria), 113, 784 low-frequency vibrations from Watson-Crick base-pairing in tRNA aqueous solution (Escherichia coli), 111, 120

purple intermediate in D-amino-acid

oxidase, flavin detection (por-

```
cine kidney), 111, 588
                                                         (embryonal carcinoma cells), 114,
  resonance, bromelain, chymopapain,
       ficin, and papain active-site
                                                    stimulation of collagen synthesis in
       substrate conformations, compari-
                                                         corneal endothelial cell culture
       son, <u>117</u>, 725
                                                         (rabbit), 114, 395
Receptors, \underline{\text{see}} specific receptors Red dye No. 2
                                                    transfer in vitro through fasting-
                                                         and postheparin human plasma (rat
  stimulation of carcinogenesis-linked
                                                         chylomicron), 115, 958
       aryl hydrocarbon hydroxylase and
                                                  Retinyl esters
       guanylate cyclase (rat liver),
                                                    transfer in vitro through fasting-
       111, 409
                                                         and postheparin human plasma (rat
Renocortin
                                                         chylomicron), 115, 958
  characterization (rat), 117, 878
                                                  Retrovirus
Respiration
                                                    reverse transcriptase decrease in
  alteration resulting in lack of Na<sup>+</sup>
                                                         hybridoma cell supernatants, role
       pump in mutants sensitive to car-
                                                         of mycoplasma contamination
       bonylcyanide <u>m</u>-chlorophenyl-
                                                         (mouse), <u>112</u>, 265
       hydrazone (Vibrio alginolyticus),
                                                  Reverse phase evaporation
      114, 113
                                                    bacteriorhodopsin incorporation into
  interconnection with photogenerated
                                                         large unilamellar liposomes, 111,
      membrane potential measured by
       tetraphenylphosphonium ion re-
                                                  Reverse transcriptase, see DNA
      distribution (Rhodopseudomonas
                                                         nucleotidylexotransferase
      capsulata), 11\overline{3}, 15\overline{5}
                                                  RHC 80267, see (1,6-Di(0-carbamoy1)-cyclohexanone oxime)hexane
Restriction endonuclease analysis
  nucleotide sequence changes in DNA of
                                                  Rheumatoid arthritis
       Algerian patients with B-thal-
                                                    acute, plasma α1-antichymotrypsin
       assemia, 113, 269
                                                         amino terminal sequence different
Reticulocytes
                                                         from normal (human), 111, 438
  Fe uptake, NH4Cl effect (rat), 113,
                                                  Rhizobium japonicum
                                                    strains producing 4-0-methyl-D-gluco-
  transferrin recycling, NH<sub>4</sub>Cl effect
                                                         rono-L-rhamnan, agglutination by
       (rat), <u>113</u>, 650
                                                         soybean lectin, 111, 798
Retinal
                                                  Rhodanese, see Thiosulfate
  chromophore, carboxyl group
                                                         sulfurtransferase
       localization (bacteriorhopsin),
                                                  Rhodopseudomonas capsulata
  114, 872; erratum, 115, 407 inhibition of 12-0-tetradecanoyl-
                                                    photogenerated membrane potential,
                                                         interconnection with respiratory
       phorbol-13-acetate activated,
                                                         components, 113, 155
      Ca<sup>2+</sup>- and phospholipid-depen-
                                                  Rhodopsin
      dent protein kinase, 114, 1194
                                                    -lipid interactions, high-resolution solid-state <sup>13</sup>C NMR (bovine re-
Retinoic acid
  binding protein, intracellular
                                                         tina), <u>114</u>, 1048
       detection, HPLC (human cultured
                                                  Riboflavin
       cell, tumor cytosols), 116, 75
                                                    deficiency and repletion, effect on
  effect on HL60 cells, differentiation
                                                         H<sub>2</sub>O<sub>2</sub> production and catalase
       induction and glycosyltransferase
                                                         biosynthesis (mammalian), 117, 788
      activity increase (human), 110, 348; erratum, 111, 775
                                                  Riboflavin-binding protein interaction with 8-fluoro-8-demethyl-riboflavin, <sup>19</sup>F NMR study (hen egg white), <u>110</u>, 406
  stimulation of collagen synthesis in
      corneal endothelial cell culture
       (rabbit), <u>114</u>, 395
                                                  2-B-D-Ribofuranosylselenazole-4-
all-trans-Retinoic acid
                                                         carboxamide
  effect on incorporation of palmitic
                                                    -induced maturation, human promyelo-
       and arachidonic acids into vari-
                                                         cytic leukemia cell line, 115, 971
      ous phospholipids (guinea pig
                                                    and 2-\beta-D-ribofuranosylthiazole,
       peritoneal granulocytes), 114, 261
                                                         cytotoxicities (murine tumor cell
Retinol
                                                         culture), <u>115</u>, 544
  binding protein, intracellular
                                                  2-B-D-Ribofuranosylthiazole-4-
      detection, HPLC (human cultured
                                                         carboxamide
       cell, tumor cytosols), 116, 75
```

differentiation induction, mechanism

and 2-p-D-ribofuranosylselenazole-

```
formation with initiation factor,
      4-carboxamide, cytotoxicities
                                                     GTP-dependent stimulation by UTP
      (murine tumor cell culture), 115,
      544
                                                     (Streptomyces aurefaciens), 114,
Ribonuclease A
                                                     222
  inhibition by porcine ribonuclease
                                                   60-S, altered in dystrophic
      inhibitors (bovine pancreatic),
                                                     skeletal muscle (hamster), 115,
      114, 1154
  second derivative Fourier transform
                                              Ricinus communis toxin
                                                binding to intestinal microvillus
      infrared spectra (bovine), 115,
                                                     membranes, increase during post-
Ribonuclease H
                                                     natal development (rat), 113, 391
  removal of RNA primer from DNA in
      poly(A)-poly(dA) homopolymer
                                                 detection in human hypothalamus
                                                     together with a-neo-endorphin and
      (chicken embryo), 110, 470
                                                     dynorphin A, 113, 30
Ribonuclease inhibitors
  ribonuclease A inhibition (porcine
                                              RNA
                                                 association with dexamethasone-
      liver, thyroid), 114, 1154
                                                     receptor complex in nuclei (HeLa
Ribonuclease P
                                                cells), 113, 876
double-stranded (dsRNA)
  RNA processing mutant effect
      (Escherichia coli), 114, 690
Ribonuclease T1 binding of 8-bromoguanylic acids,
                                                   cucumber mosaic virus-associated,
                                                     complimentary strand separation
                                                     (infected tobacco tissue), 116,
      absorption and circular dichroism
      spectroscopy, 114, 88
                                                  HeLa-cell mRNA protein synthesis
Ribonucleoproteins
                                                     inhibitor component in reticulo-
  11-S, requirement for lysosomal
                                                     cyte lystate, 114, 41
      enzyme translocation across mi-
                                                  M1, reverse transcription, double-
      crosomal membranes (canine, por-
                                                     stranded cDNA synthesis (Saccha-
      cine), 115, 275
                                                     romyces cerevisiae), 114, 518;
  vesicular stomatitis virus, virus
                                                     erratum, 115, 406
      production and release after mi-
                                                  peanut stunt virus-associated,
      croinjection (vero cells), 116,
                                                     complimentary strand separation
Ribonucleoside diphosphate
                                                     (infected tobacco tissue). 116.
  as substrates for nucleoside-
      diphosphatase, cluster analysis
                                                   synthesis from poly I, poly C, and
      (rat hepatocyte Golgi fraction), 113, 178; erratum, 114, 1200
                                                     heat treatment, interferon a in-
                                                     duction in human lymphocytes.
                                                     110, 851
Ribonucleoside-diphosphate reductase
                                                <sup>3</sup>H-labeled, distribution pattern in
  tyrosine free radical generation
                                                     polyacrylamide gel, recording by
      during incubation with dithio-
                                                     new Linear Analyzer, 113, 703
      threitol and iron in presence of
      air (calf thymus), 110, 859
                                                messenger (mRNA)
Ribonucleotide reductase, see
                                                   from aged slices of sweet potato
      Ribonucleoside-diphosphate
                                                     roots, cell-free synthesis of
      reductase
                                                     succinate dehydrogenase and mito-
                                                     chondrial F<sub>1</sub>-ATPase, <u>113</u>, 235
Ribonucleotides
  androgen receptor binding character-
                                                  δ-aminolevulinate synthase from
      istics (rat prostate), <u>114</u>, 1147
                                                     chicken embryo liver, enzyme pre-
  incorporation into mRNA and not into
                                                     cursor as primary translation
      DNA (permeabilized CHEF/18
                                                     product of, 110, 23
      cells), 115, 1022
                                                  androgen-dependent from ventral
Ribose-5-phosphate
                                                     prostate, cell-free translation
                                                     (rat), 111, 624
  and 2-aminopyrimidine aqueous
                                                  \alpha_1-antitrypsin detection (human
      reaction, nucleoside-5'-monophos-
      phate formation, 117, 93
                                                     leukocytes, liver), 116, 375
                                                  apolipoprotein A-I<sup>+</sup>, coding for precursor protein, sequencing
Ribosomes
  membrane bound, \alpha-amylase and \alpha-
      glucosidase synthesis (Bacillus
                                                    using cloned cDNA (human liver),
      licheniformis), 114, 677
                                                    112, 257
  subunits
                                                  casein
    30-S and 70-S, initiation complex
```

accumulation, insulin and

```
prolactin requirement (rat),
    116, 994
  42K, stimulation by hydro-
    cortisone in mammary tissues
    from adrenalectomized virgin
    rats, 114, 380
  25K, total hydrocortisone
    dependence of accumulation in
    mammary tissues from adrenalec-
    tomized virgin rats, 114, 380
from choriocarcinoma cells,
  direction of placental alkaline
  phosphatase biosynthesis in cell-
  free system, 111, 611
creatine kinase from canine
  myocardium, in vitro translation,
  110, 967
cytoplasmic
  from HeLa cells, dsRNA-like compo-
    nents that inhibit protein syn-
    thesis in reticulocyte lysate,
    114, 41
  nuclear precursors in glioma and
    fetal brain cells, comparison
    by hybridization with cDNA (hu-
    man), <u>110</u>, 96
ferritin, translatable levels in
  leaves with various Fe contents
  (Phaseolus vulgaris), 115, 463
formation, 7-S storage protein
  8-subunit, exogenous methionine
  effect (cultured soybean cotyle-
  dons), <u>117</u>, 658
B-globin, long molecules among
transcripts of 5' end (human bone
  marrow), 112, 1041
growth hormone, inhibition in
  pituitary tumor by estradiol
  treatment (rat), 113, 462
hepatic or enteric from different
  mouse strains, in vitro transla-
  tion of multiple apolipoprotein
  A-I plasma isoforms, 114, 275
histone, increase by protein
  synthesis inhibition in exponen-
  tially growing and synchronous
  G<sub>1</sub> HeLa cells, <u>114</u>, 131
from human submandibular gland,
  cell-free translation of pro-
   line-rich protein, 111, 239
interleukin 2, cloning (human
   tonsils), <u>115</u>, 1040
α-lactalbumin
   accumulation in mammary explants,
     inhibition by cortisol, rever-
     sal by prostaglandin E2 or
F_{2\alpha} (mouse), 111, 1059 in epididymis (rat), 117, 306 malic enzyme, induction by fructose
   and insulin in diabetic liver
   (rat), 112, 176
```

```
methionine-enkephalin precursor,
  regulation by haloperidol and
  lithium in striatum, mechanisms
  (rat), 113, 391
myosin light chain and isozymes,
  changes during muscle transforma-
  tion from fast to slow (rabbit),
nonpolysomal, content and
  translational activity during
  cell cycle (mouse sarcoma-180
  ascites), <u>113</u>, 923
pituitary encoding precursors to
  lutropin and follitropin sub-
  units, translation activity regu-
  lated by estrogen treatment in
  vivo (rat), 114, 65
polyadenylation inhibition by
  gonadotropin-releasing hormone
  (rat prostate), 115, 451
polysomal from rat liver, cytosolic
  protein synthesis in cell-free
  system, 113, 199
prolactin, stimulation in pituitary
  tumor by estradiol treatment
  (rat), <u>113</u>, 462
ribonucleotide incorporation
  (permeabilized CHEF/18 cells),
  115, 1022
sequences, recombinant DNA
  synthesized human and ovine
  growth hormone effects (hepato-
  cyte culture), 115, 882
serum albumin, in hepatic postribo-
  somal particles (rabbit), 113, 868
stacking-interaction model, 7-
  methylguanine-tryptophan systems,
  <u>115</u>, 849
в subunit synthesis, regulation
  by RNA polymerase at level of
  translation (Escherichia coli),
  113, 1018
5'-terminal sequence of whey acidic
  protein, 18-5 rRNA 3'-end inter-
  action sites (mouse), 116, 167
thyroglobulin nuclear and cyto-
  plasmic thyroid cell fractions,
  thyrotropin post-transcriptional
  effect (porcine), 116, 54
total from rat brain, myelin
  proteolipid synthesis in cell-
  free system, <u>110</u>, 432
translation product, identification
  by rabbit antibodies to glycogen
synthase (rat liver), 117, 332 tubulin, accumulation, induction by
  gangliosides (neurohybrid clone
SB21B1 cells), <u>116</u>, 974 vesicular stomatitis virus, hydro-
  lysis by 2', 5'-An-dependent nuclease activated by 2',5'-A4
```

```
tetramer analog, 111, 205;
     erratum, 114, 120\overline{0}
  vitellogenin, estrogen-induced
    synthesis, inhibition by tamoxi-
     fen (chicken liver), 112, 425
newly synthesized in preblastoderm
    embryos, nuclear transcripts in
    polysomes (Drosophila melanogas-
\frac{\text{ter}}{\text{poly(A)-rich, from pituitary tumor}}
    inhibited by estradiol, transla-
    tional activities in comparison
    with untreated tumors (rat), 113,
primer, removal from DNA in poly(A)-
    poly(dA) homopolymer by ribonu-
    clease H, <u>110</u>, 470
processing mutant, isolation, effect
    on RNase P (Escherichia coli),
    114, 690
5-5
  incorporation into 16S·23S RNA
    complex after addition of 50S
    ribosomal proteins in certain
    combinations (Escherichia coli),
    114, 348
  partial melting of segment around
     pseudouridine modified with 4-
    bromomethy1-7-methoxycoumarin
     (yeast), 114, 81
16-S·23-S complex, incorporation of
     50-S RNA after addition of 50-S
    ribosomal proteins in certain
    combinations (Escherichia coli).
    114, 348
ribosomal (rRNA)
  accumulation, cell cycle initiation
    signals (Swiss 3T3 cells), 117,
    22Š
  genes, resemble
    interferon-induction specific
    sequence cDNA clones (mitochon-
    dria), 114, 670
  5-S nucleotide sequence (Coprinus
    <u>cinereus</u>), <u>116</u>, 148
  18-S, 3'-end, whey acidic protein
    mRNA 5'-terminal sequence inter-
    action sites (mouse), 116, 167
transfer (tRNA)
  aqueous solution, low-frequency vibrations from Watson-Crick base
    pairing (Escherichia coli), 111,
 N6^{120} (\Delta^2-isopentenyl)adenosine
    and N^0-(4-hydroxy-3-methyl-
    but-\overline{2}-enyl)adenosine, monoclonal
    antibodies to, characterization
    (bovine, murine), <u>114</u>, 791
  leucyl-, p-nitrophenylcarbamyl derivative of pentanucleotide
```

from, lack of affinity of 3'-

```
terminal fragment to peptidyl-
      transferase (Saccharomyces
      cerevisiae ribosomes), 113, 941
    reaction with carcinogenic
      arylamines, mediation by prosta-
      glandin H synthase, 111, 96
    tRNA<sup>Leu</sup> primary structure
      (Bacillus stearothermophilus),
      112, 578
    tRNA<sup>lys</sup> modification reactions,
      competence and progression growth
      factor effects (BALB/C 3T3
      cells), 115, 598
    tRNA_{m}^{Met}, nucleotide sequence
      (wheat germ), 114, 1161
    transformation of 4-thiouridine-
      5'-monophosphate to uridine-5'-
      monophosphate, induction by
      enzymatically generated excited
      molecules (Escherichia coli),
      117, 923
RNA-DNA hybrid helix
  cleavage at junction between RNA and
      DNA portion by ribonuclease H
      from chicken embryo, 110, 470
RNA polymerase
  regulation of mRNA β-subunit
      synthesis at level of translation
      (Escherichia coli), 113, 1018
RNA synthesis
  inhibition by
    aflatoxin B<sub>1</sub>, microsomal enzyme
      inhibitor effect (rat hepato-
      cytes), <u>115</u>, 15
    cisplatin in vitro, adriamycin
      effect (Escherichia coli), 115,
    8-methoxypsoralen in combination
      with uv irradiation (L1210
      cells), 112, 965
  stimulation by aminoglycoside
      antibiotics in absence of protein
      synthesis and quanosine polyphos-
      phate production (Escherichia
      coli), 112, 801
Rous sarcoma virus
  rat cell transformation, reduction of
      epidermal growth factor binding,
      113, 678
 temperature-sensitive mutant, effect
      on calmodulin and its receptor in
      transformed cells, 112, 647
```

Ruthenium red

-insensitive Ca²⁺ uptake,

phosphate-dependent (mung bean

mitochondria), 114, 1176

1983 Cumulative Subject Index

S

Saccharomyces cerevisiae

α-factor, high-molecular-weight precursor synthesis in vivo, 116, 822 oxygen-deprived culture, ergosterol sparing by cholesterol and other sterols lacking 24 β-methyl group, 112, 47

Salivary glands

parotid cells <u>in vitro</u>, secretion stimulation by forskolin (mouse), <u>111</u>, 21

Salmonella typhimurium

aspartate chemoreceptor-methylaccepting chemotaxis protein, ion channel element selection, <u>115</u>, 648

benzo [a]pyrene-induced increase in revertant numbers, reduction by chalcone derivatives and L-ascorbic acid, 112, 833; erratum, 115, 406

Salmonella typhimurium TA98

TA98/1,8-DNP6-deficient, proximate mutagen activation and DNA binding by acetyl-CoA-dependent enzyme, 116, 141

Sarcolemma

cardiac, adenylate cyclase inhibition, sodium fluoride effect (canine, rabbit, rat), <u>115</u>, 583

Sarcoma-180 ascites cells
nonpolysomal mRNA content and
translational activity during
cell cycle (mouse), 113, 923

Sarcoma cells

platelet-derived growth factor-like growth factor, synthesis, homology with simian sarcoma virus transforming protein (human), 117

117, 176 Sarpedobilin

> biosynthesis from pterobilin in larvae (<u>Papilio sarpedon</u>), <u>110</u>, 779

Schizophyllum commune

cellulase, N-terminal sequence, homology with hen egg-white lysozyme active site, 116, 408

Schizosaccharomyces pombe

and <u>Candida tropicalis</u>, plasma membrane ATPase, antigenic relationship, <u>115</u>, 1114

Scorpion toxin receptors α and β, photoaffinity labeling, role in voltage-dependent Na⁺ channels (rat brain), 115, 415 Secretin

cAMP accumulation induction in

pancreatic adenocarcinoma cells during differentiation in culture (human), 111, 958

effects on glucose output and cyclic AMP (isolated perfused rat liver), 115, 743

liver), 115, 743
in gastrointestinal tract during
postnatal development (rat), 112,
891

inhibition of plasma growth hormone increase induced by human pan- creatic growth hormone-releasing factor during anesthesia (rat), 112, 469

Selenium

-deficient platelets, 12-hydroperoxytetraenoic acid formation, glutathione peroxidase and lipoxygenase pathway coupling (rat), 117, 102

Seminal plasma

major protein PDC-109, amino acid sequencing (bovine), 113, 861

Sepiaterin reductase

effect on tetrahydro-sepiapterin intermediate in tetrahydrobiopterin biosynthesis (bovine adrenal medulla), 115, 888

Serine chemoreceptor

-methyl-accepting-chemotaxis protein, ion channel element selection (Escherichia coli), 115, 648

Serine hydroxymethyltransferase sequence homology between prokaryotic, eukaryotic forms (rabbit liver, Escherichia coli), 116, 1007

Serotonin

adenylate cyclase activation, inhibition by aluminum chloride (<u>Fasciola hepatica</u>), <u>112</u>, 911

secretion by human platelets, synergistic functions of 12-0tetradecanoylphorbol-13-acetate and ionophore A23187, 112, 778

thrombin-induced release from human platelets

association with protein phosphorylation, 111, 1034

inhibition by cAMP, 112, 693

inhibition by 74,000-dalton protein isolated from platelet membranes, 112, 228

Serum

endotoxin-treated, specific βendorphin binding sites on SC5b-9 complement complex (human), <u>113</u>, 839

fetal calf, see Fetal calf serum
-stimulated intracellular pH increase
(Swiss 3T3 cells), 116, 931

```
Serum albumin
                                              Sodium bicarbonate
  decrease by cytokine preparation
                                                incorporation into renal cortex
      injection (rat) 112, 14
                                                    microsomes, blockage in vitamin D deficiency (rat), \underline{113}, 294
  gene, structural integrity in
      congenital analbuminemia (human),
                                              Sodium borohydride
      116, 817
                                                reaction with highly strained ether
  hydrated powders, fluorescence
                                                    ring in neocarzinostatin chromo-
      lifetimes (bovine), 114, 901
                                                    phore, NMR, 113, 538
  intra- and interspecies hybrid mole-
                                              Sodium chloride
      cules, spontaneous formation be-
                                                thylakoid particle washing, effect on
      tween peptide-fragment derivatives
                                                    reversible 02 evolution inhibition, role of 23,000-dalton pro-
      (bovine, human, rat), <u>114</u>, 20
  production, 5-azacytidine effects
                                                    tein, 113, 738
      (neonatal rat liver), 116, 939
                                              Sodium dodecyl sulfate
  role in hydrogen ion diffusion by
                                                nucleosomal DNA-binding proteins,
      gastric mucus (canine), 115, 1053
                                                    dissociation resistance (chicken
  synthesis in hepatic postribosomal
                                                    erythrocyte nuclei), 114, 99
      particles after addition of ribo-
                                                stimulation of autophosphorylation of
      somal subunits and sources of
                                                    cAMP-dependent protein kinase
      energy (rabbit), 113, 868
                                                    catalytic unit (bovine heart).
Sialidosis
                                                    113, 916
  4-methylumbelliferyl-\alpha-D-N-acetyl-
                                              Sodium fluoride
      neuraminic acid neuraminidases,
                                                effect on membrane-bound adenylate
      genetically different forms
                                                    cyclase activity (canine, rabbit,
      (human leukocytes), 117, 470
                                                    rat heart sarcolemma), 115, 583
Sialoside-globoside
                                              Sodium ion
  teratocarcinoma cell glycolipid
                                                collagen production modulation (human
      (human), 112, 935
                                                    fibroblast cell culture), 117, 313
Siba
                                                effect on
  synthetic nucleoside, inhibition of
                                                  high-affinity agonist binding sites
      1-aminocyclopropan-carboxylic
                                                    of muscarinic receptor subtypes
      acid synthesis (tomato fruit
                                                    (rat cerebellum, cerebral cortex,
      extracts), 113, 586
                                                    heart), 116, 284
Sickle cell disease
                                                  muscarinic acetylcholine receptor
 hemoglobin Stanleyville II mutation.
                                                    properties (bovine cerebral cor-
      inhibition of fiber formation
                                                    tex), <u>112</u>, 948
      (human erythrocytes), 111, 8
Signal recognition particle, see
      Ribonucleoproteins, 11-S
                                                    (rat), 112, 55
Silicate
 transmembrane transport induced by
      ionophore isolated from Nitzschia
                                                    types), 116, 86
      alba, 114, 365
Simian sarcoma virus
 transforming protein, homology with
      platelet-derived growth factor-
                                                    430
      like growth factor (human glioma,
      sarcoma cells), <u>117</u>, 176
Simian virus 40
 uv-irradiated minichromosomes, as
                                                    981
      substrates for DNA repair endo-
      nucleases, <u>113</u>, 309
Sincalide
                                                    pig), <u>115</u>, 827
  -stimulated pancreas, effect on
      phospholipid synthesis (human,
      rat), 115, 771
Sinefungin
 from Streptomyces griseolus.
      inhibition of 1-aminocyclopro-
      pane-carboxylic acid synthesis
```

(tomato fruit extracts), 113, 586

S₁ Nuclease, see Nuclease S₁

Sperm

Subject Index

```
voltage-dependent Na<sup>+</sup> channel
   α and β scorpion toxin receptor
                                                  -activating peptides, purification,
      roles (rat brain), 115, 415
                                                       action, and amino acid sequence
   with high affinity to tetrodotoxin
                                                       (<u>Anthocidaris crassispina egg</u>
                                                  Ca<sup>2+</sup> jelly), 117, 147
      changes during fetal and post-
        natal development (rat brain,
                                                       uptake, stimulation by
        cerebellum, skeletal muscle),
                                                       calmodulin antagonists, mechanism
        110, 894
                                                       (porcine), <u>114</u>, 28
      role of 270,000-dalton protein
                                                  caudal epididymal, forward mobility,
         (Electrophorus electricus elec-
                                                       stimulation by cumulus oophorus-
egg complexes (bovine), 115, 777
        tric organ), 114, 126
                                                  satellite DNA, undermethylation
Sodium lauryl sulfate
                                                       (bovine, mouse), 113, 695
  silver strain, peptide mapping of
      myosin heavy-chain isoforms (rat
                                                Spermidine
                                                  auxotroph growth stimulation: sym-
      skeletal muscle), 116, 793
Somatostatin
                                                       homospermidine, aminopropyl-
  binding to pancreatic membranes,
                                                       cadaverine, and spermidine struc-
      regulation by Ca^{2+}, K^{+}, and
                                                       tural specificities (Escherichia
                                                       co<u>li), 117</u>, 616
           (guinea pig), 115, 827
                                                  hyperoxia-induced delayed increase in
                                                       lungs (rat), 113, 491
  inhibition of
                                                   inhibition of
    forskolin- and isoproterenol-
                                                     fructose-1,6-bisphosphatase
      stimulated cAMP accumulation,
                                                       (spinach chloroplasts), 115, 707
      pertussis toxin effect (murine
                                                     lysine decarboxylase (Escherichia
      anterior pituitary tumor cells),
      <u>115</u>, 794
                                                       coli), 114, 882; erratum, 116, 355
                                                  microvascular, synthesis, blood-brain
barrier breakdown mediation (rat
    insulin secretion, lack of effect
      on glucose-stimulated phosphati-
                                                       cerebral cortex), <u>116</u>, 1039
      dylinositol turnover (rat pan-
                                                   stimulation of T4 polydeoxyribo-
      creatic islets), <u>112</u>, 419
                                                  nucleotide synthetase, <u>117</u>, 217 structural specificity in stimulating
  relative proportions of three
      molecular forms in six brain
                                                       spermidine auxotroph growth
      areas, radioimmunoassay (rat),
                                                       (Escherichia coli), 117, 616
      112, 297
                                                Spermine
Somatotropin
125I-labeled, binding to rat liver
                                                  fructose-1,6-bisphosphatase inhibition
                                                       (spinach chloroplasts), 115, 707
       lactogenic sites, specificity
                                                   hyperoxia-induced delayed increase in
      (human), 115, 29
                                                       lungs (rat), 113, 491
Soybean agglutinin
                                                   microvascular, synthesis, blood-brain
  binding to intestinal microvillus
                                                       barrier breakdown mediation (rat
      membranes, increase during post-
                                                       cerebral cortex), <u>116</u>, 1039
      natal development (rat), <u>113</u>,
                                                   stimulation of T4 polydeoxyribo
      400; erratum, <u>116</u>, 355
                                                       nucleotide synthetase, 117, 217
  specificity toward Rhizobium japonicum
                                                Sphigomyelin
      strains producing 4-0-methyl-D-
                                                   accumulation in spleen, decrease
      glucurono-L-rhamnan, 111, 798
                                                       after bone marrow transplantation
Sparsomycin
                                                       (Niemann-Pick mouse), 113, 605
  analog, peptidyltransferase
                                                   degradation by fibroblasts, strong
       inhibition, role of sulfoxide
                                                       inhibition by cholesterol and 7-
      moiety, 114, 1
                                                       dehydrocholesterol (human), 112,
Spectrin
                                                       860
  degradation by Ca<sup>2+</sup>-activated
                                                   vesicles, specific binding of
      protease (rat erythrocyte membrane), 117, 372
                                                       12-0-tetradecanoylphorbol-13-
                                                       acetate, inhibition by phorbol esters, indole alkaloids, and
  -like protein, synaptosomal component
       (rat cerebral cortex), 115, 437
                                                       polyacetates, 112, 709
                                                Sphingomyelinase
Spectrin-actin complexes
                                                   decrease by cholesteral and 7-dehydro-
  crosslinking by band 4.1, effect on
                                                       cholesterol, sphingomyelin
      actin polymerization (human
```

degradation inhibition (human

erythrocytes), <u>111</u>, 360

fibroblasts), 112, 860 Staphylococcal a-toxin insertion into erythrocyte membranes, detection by photolabeling (rabbit), <u>111</u>, 444 Staphylococcus aureus agglutination by polyphemin, 113, 611 Stearoyl coenzyme A desaturation by NADPH-cytochrome reductase (Tetrahymena microsomes), 115, 456 Sterigmatocystin conversion to 0-methylsterigmatocystin and aflatoxin B_1 in cell-free system (Aspergillus parasiticus mutant), 116, 1114 Steroid 17 a-monooxygenase activities as 17 α -hydroxylase and C_{17,20}-lyase, reaction with antibodies to testicular C₂₁ side-chain cleavage P-450 (porcine adrenal microsomes), 111, 512 Steroidogenesis adrenal, corticotropin-induced stimulation, elimination by γ_3 melanotropin antisera (rat), 110, 357 Steroids interactions with lipid bilayers, fluorescence anisotropy, 113, 799 Sterols -carrier protein2, mitochondrial pregnenolone synthesis stimulation (rat adrenal, hepatic, ovar-ian cytosol), 117, 702 lacking 24 ß-methyl group, ergosterol sparing in growth of oxygen-deprived <u>Saccharomyces</u> cerevisiae, 112, 47 Stopped-flow fluorescence enzyme-substrate complexes of aminopeptidase, formation and breakdown (Aeromonas), 111, 946 Streptococcus synthetic peptides coupled to tetanus toxoid, antibody immunogenicity and response specificity (murine), <u>117</u>, 908 Streptococcus faecalis non-viable cells containing antigenic glycans, immunization-induced anti-lactose antibody production (rabbit), 113, 555

Streptococcus mutans

Streptomyuces alboniger

enzyme, dextran branch formation in

puromycin-producing, acetylation effects, 113, 772

absence of sucrose, 115, 287

Streptomyces aurefaciens peptide chain initiation in presence of initiation factor, GTPdependent stimulation by UTP, <u>114</u>, 222 Streptomyces hygroscopicus hygromycin B phosphotransferase gene. molecular cloning and expression in Streptomyces lividans, 117, 6 Streptomyces hygroscopicus SF-1293 herbicide bialophos biosynthesis, role of phosphinic acid derivatives MP-103, MP-104, and MP-105 produced by blocked mutant, 111, 1008 Streptomyces lividans hygromycin B phosphotransferase gene from <u>Streptomyces hygroscopicus</u>, molecular cloning and expression, 117, 6 Streptozotocin -induced diabetes, effect on regulatory subunit type 1 cAMPdependent protein kinase cAMP binding activity (rat liver), 117, 794 Subcellular fractionation cardiac myocytes, nimodipine binding site density comparison (rat). 1<u>13</u>, 185 Substance P aggregate properties, synthesis and purification, 114, 1109 hydrolysis by dipeptidyl carboxypeptidase (rat brain), 116, 735 Subtilin precursor protein detection in vivo and conversion in vitro (Bacillus subtilis ATCC 6633), 116, 751 Subtilisin phosphorylase a inactivation and breaking interaction between AMP and glucose binding sites, 113, thermophilic cytochrome oxidase proteolysis, effect on protonpumping and oxidase activities, 113, 575 Succinate dehydrogenase flavoprotein subunit, mRNA-directed cell-free synthesis (sweet potato root), 113, 235 Succinate thiokinase, see Succinyl-CoA synthetase (ADP-forming) Succinyl-CoA synthetase (ADP-forming) affinity chromatography on Procion Red-agarose (cell-free extracts

from bacteria, yeast, and porcine liver), $\underline{112}$, $\underline{1021}$

Succinyl-CoA synthetase (GDP-forming) phosphorylation, inhibition by

```
-induced myelin deterioration in vitro
      dichloroacetate and AMP (rat
      brain, heart, liver, mitochon-
                                                         (human brain), 117, 141
                                                    production by neutrophils
      dria), 111, 1054
                                                       induced by
Sugars
                                                         formyl-methionyl-leucyl-phenyl-
  conversion to alcohols, isotope
                                                           alanine, inhibition by prosta-
      fractionation quantitation by ^2\text{H} NMR, \underline{111}, 890
                                                           glandins E1 and I2 (human),
Sulfate ion
                                                           113, 506
                                                         phorbol myristate acetate or
  effect on phenylglyoxal-sensitive
                                                           arachidonic acid, prostaglandin
       sites in erythrocyte membrane
                                                           E_1, I_2 effects (human), \underline{113}, 506
       (human), 110, 616
Sulfatide
                                                         phorbol myristate acetate,
  stimulation of y-aminobutyric acid
                                                            inhibition by chloromethyl
       binding to postsynaptic receptors
                                                       ketones (human), 112, 671 pseudo-inhibition by soybean-
       (murine brain), 112, 827
Sulfhydral groups
                                                         derived polypeptides (human),
  -containing peptide-Ni(III) complexes
                                                         117, 22
       and hydrogenase Ni(III) chromo-
                                                    production by sensitized monofunc-
       phore, ESR, <u>115</u>, 878
                                                         tional and bifunctional psoral-
  inhibition by chloromethyl ketones
                                                         ens, 112, 638
      causing reduction in superoxide
                                                  Swainsonine<sup>-</sup>
      radical production (human neutro-
                                                    effect on macrophage receptor-
       phils), 112, 671
                                                         mediated mannosyl-oligosaccharide
  membrane, melphalan resistance
                                                         uptake and degradation (rat
       (murine L1210 leukemia cells),
                                                         lung), 116, 922
      117, 670
Sulfotransferase
                                                  Syalyltransferase
                                                     stimulation by cytokine preparation injection (rat liver, serum),
  activity in cytosol fracton of
       salivary glands, kinetics with
       triglucosyl monoalkylmonoacyl-
                                                         <u>112</u>, 14
       glycerol substrate (rat), 113, 817
                                                  Synaptosomes
Sulfur
                                                     γ-aminobutyric acid binding,
  elemental (S-8), adenylate kinase inhibition, \underline{113}, 348
                                                         stimulation by sulfatide (murine
                                                     brain), <u>112</u>, 827 aminopeptidase activity in conversion
  incorportaion into biotin from
       cystine, methionine, and thio-
                                                         of NH2-terminus of adrenocorti-
       cystine (Escherichia coli), 110,
                                                         cotropin (rat brain), 111, 259
       243
                                                     CDPdiacylglycerol-inositol 3-phospha-
Superoxide dismutase
                                                         tidyltransferase activity, stimu-
  Cu, Zn-
                                                          lation by Mn<sup>2+</sup> (rat brain),
     affinity inactivation by HO7
                                                         112, 817
       (bovine liver), 116, 1107
                                                     concanavalin A binding, low in intact
    chemically modified at all lysines,
                                                         vesicles, increase after solubi-
       reduction of anion binding and
                                                          lization by Triton X-100 (calf
       anion inhibition (bovine erythro-
                                                         brain), <u>110</u>, 804
       cytes), 111, 860
                                                     glycine receptor increase by Triton
    oxidative aging, electrophoretic
                                                          X-100 treatment (rat spinal
       variants: H<sub>2</sub>O<sub>2</sub>, ascorbate,
                                                          cord), 112, 809
       Fe(III), and EDTA effects (bo-
                                                     Y-hydroxybutyrate high affinity
                                                     binding (rat brain), 110, 262 irradiation inactivated, nitrendipine
       vine), 117, 677
  inhibition \overline{\text{of}} cytochrome \underline{c} reduction
       by hydrogen peroxide (bovine),
                                                          receptor size determination (rat
       111, 231
                                                         brain), 111, 878
                                                     lipids and proteins, developmental
  isozymes in normal mammary tissues and
       mammary tumors (rat), \underline{113}, 883
                                                          spin label study (rat brain
  Mn-, saturation kinetics (Paracoccus
                                                          cortex), <u>117</u>, 688
       denitrificans), 113, 114
                                                     phosphatidylserine, chronic ethanol
Superoxide radicals
                                                          consumption-induced increase
  generation by cytochrome \underline{P}-450 model system, \alpha-tocopherol and \gamma-oryza-
                                                          (guinea pig), <u>113</u>, 262
```

nol reaction kinetics, 115, 1002

phosphodiesteratic breakdown of

endogenous polyphosphoinositides

Temperature effects

1983 Cumulative

Subject Index

```
(guinea pig brain), 112, 919
  spectrin-like protein component,
      identification (rat cerebral cor-
      tex), 115, 437
Synexin
  binding to chomaffin granules, Ca
      dependence and pH sensitivity
      (bovine liver), <u>114</u>, 355
  chromaffin granule aggregation
      induction and secretion, inhibi-
      tion by phenothiazine drugs (bo-
      vine adrenal medulla), 113, 908
  inactivation by Staphylococcus aureus
      V-8 protease and synexin-like
      protein (bovine adrenal medul-
      lary), 112, 147
  -like protein enhancing Ca<sup>2+</sup>-
      induced membrane aggregation,
      isolation and identification
      (bovine adrenal medullary,
      liver), 112, 147
                    Τ
Tamm-Horsfall urinary glycoprotein
  blood group SDZ-active penta-
      saccharide, isolation and
      structure (human), 115, 625
  inhibition of estrogen-induced
      vitellogenin mRNA synthesis
      (chicken liver), 112, 425
Tangier disease
 proapolipoprotein A-I, isolation and
      amino acid sequencing (human
      plasma), 113, 934
TCDD, see 2,3,7,8-Tetrachlorodibenzo-
      p-dioxin
T cell growth factor, see also Inter-
      leukin 2
  isolation and characterization (human
      Jurkat leukemia cell line), 117,
      623
 primate, purification, distinct
     molecular species, reverse phase
      HPLC (ape lymphocytes), 115, 762
Teichoic acid
 binding to polyphemin isolated from
     horseshoe crab serum, 113, 611
  inhibition of 12-0-tetradecanoylphor-
     bol-13-acetate binding to sphin-
     gomyelin, 112, 709
 with phytohemagglutinin, induction of
      interferons \gamma and \delta production by
      lymphocytes (human blood), 111,
 and 12-0-tetradecanoylphorbol-13-
     acetate, effect on insulin secre-
```

tion (rat pancreatic islet), 117,

```
on aldolase, activity of only two out of four binding sites at -13°
  (rabbit muscle), 110, 578 on ATPase structure, intrinsic
      tryptophan fluorescence changes
       (bovine cardiac submitochondrial
      particles), 111, 366
  estradiol receptor binding capacity
      loss in vitro at 37°C, protec-
      tion by treatment with dextran-
      coated charcoal (rat uterus),
      110, 713
  on fluorescence of 5S RNA modified
      with 4-bromomethy1-7-methoxy-
      coumarin, partial melting detec-
      tion (yeast), 114, 81
  on low-frequency sound emissions by
      motile cultures (Tetrahymena
  thermophilia cilate), 117, 190 on 2',5'-oligoadenylate synthetase-
      binding protein activity (mam-
      malian extracts), 117, 57
  palmitoyl-CoA desaturase increase after shift from 34 to 15°C,
      especially in ergosterol-replaced
      cells (Tetrahymena pyriformis),
      113, 96
Teratocarcinoma
  carbohydrate α-galactosyl residue,
       antigenic determinant (human
      ovarian germ cell tumor), 115, 268
  glycolipids fucosyl-globoside and
      sialosyl-globoside, isolation and
       identification (human), 112, 935
Terbium ion (Tb^{3+})
  binding to two receptors with
      different sensitivity to Ca<sup>2+</sup>
      (GH3 pituitary tumor cells), 111,
Terminal deoxynucleotidyl transferase,
      see DNA nucleotidylexotransferase
Testosterone
  α-D-glucuronidase induction in
      kidney, unaffected by polyamine
      synthesis inhibition (mouse).
      112, 770
  metabolism in
    granulosa cell culture, androgen
      effects (rat), 113, 948
    neonatal brain, comparison in
      normal male and tfm mutant (rat),
      111, 717
  production stimulation by luteinizing
      hormone, mechanism (rat testicular cells), <u>112</u>, 496
Tetanus toxin
  effect on Ca action potential spike
       (neuroblastoma clone N1E-115).
      115, 788
```

```
2,3,7,8-Tetrachlorodibenzo-p-dioxin
                                                         intermediate, sepiaterin reduc-
  7-ethoxycoumarin O-deethyTase
                                                         tase effect (bovine adrenal me-
                                                         dulla), <u>11</u>5, 888
       induction (human tumor-derived
                                                     inhibition of phenylalanine hydroxy-
       epithelial cells), <u>115</u>, 611
                                                         lase limited proteolysis by
  oral administration, lipoperoxidation
                                                         chymotrypsin, 110, 919
       induction as possible cause of
toxicity (rat liver), <u>111</u>, 854
12-0-Tetradecanoylphorbol-13-acetate
                                                  Tetrahydro-sepiapterin
                                                    intermediate in tetrahydrobiopterin
  binding to
                                                         biosynthesis, sepiaterin reductase effect (bovine adrenal me-
    soluble cytosolic protein,
dependence on Ca<sup>2+</sup> and phospho-
                                                         dulla), 115, 888
       lipid presence (murine tissues),
                                                  Tetrahymena pyriformis
       <u>111</u>, 340
                                                    ergosterol-induced increase in
    sphingomyelin vesicles, inhibition
                                                         palmitoyl-CoA desaturase activi-
       by phorbol esters, indole alka-
                                                         ty, especially after temperature shift from 34° to 15° C, 113, 96
       loids, and polyacetates, 112, 709
  Ca<sup>2+</sup>-dependent stimulation of
                                                  Tetrahymena thermophilia
       hexose transport (murine 3T3 fi-
                                                    cilate, motile cultures, temperature-
       broblasts), 117, 637
                                                         dependent low frequency sound
  -dependent carcinogenesis, inhibition
                                                         emissions, 117, 190
       by 1\alpha,25-dihydroxyvitamin D_3
                                                  meso-Tetra(4-N-methylpyridyl)porphine
and Zn<sup>2+</sup> and Ni<sup>2+</sup> derivatives,
       (murine skin), 116, 605
  effect on
                                                         interactions with DNA, NMR and
    aldosterone secretion, angiotension
                                                         viscometric studies, 113, 148
       II and ionophore A23187 compari-
                                                  Tetraphenylphosphonium ion
       son (porcine adrenal gland), 116,
                                                    light-dependent uptake, oxygen-
                                                         induced inhibition as probe of
    HL60 cells, differentiation
                                                         interaction between photosynthe-
       induction and glycosyltransferase
                                                         tic and respiratory components in
       activity increase (human), 110,
                                                         membrane system (Rhodopseudomonas
       348; erratum, 111, 775
                                                         capsulata), 113, 155
    tyrosine phosphorylation (chicken
                                                  Tetraphenylporphyrin
       embryo fibroblasts), 115, 536
                                                    Co and Fe, -thiolate complex,
  and ionophore A23187, effect on
                                                         superoxide generation, α-toco-
       insulin secretion, comparison
                                                         pherol and y-oryzanol reaction
       with glucose (rat islet), 117, 448
                                                         kinetics, 1<u>15</u>, 1002
  stimulation of
                                                  Tetrapyrrole
    arachidonic acid release from
       cultured cells, inhibition by lecanoric acid analogs, <u>110</u>, 733
                                                    bile pigment, affinity and thin layer
                                                         chromatography (rat liver micro-
                                                         somes), 117, 406
    proliferation in lectin-treated
                                                  Tetrodotoxin
       thymocytes, inhibition by agents
                                                    binding to voltage-dependent Na<sup>+</sup>
       increasing cellular cAMP,
                                                         channel
       mechanism (mouse), 114, 93
    prostaglandin E2, F2, and arachidonic acid without
                                                       during fetal and postnatal
                                                         development (rat brain, cerebel-
                                                         lum, skeletal muscle), 110, 894
       mitogenesis induction (3T3 rat
    cell variants), 111, 194 serotonin release and phosphory-
                                                       role of 270,000-dalton protein as
                                                  binding site (Electrophorus elec-
tricus electric organ), 114, 126
Tetrodotoxin receptors
       lation of 20K and 40K proteins
  (human platelets), \underline{112}, 778 and teleocidin, effect on insulin
                                                    in skeletal muscle plasma membranes
                                                         during purification (rabbit),
       secretion (rat pancreatic islet),
                                                         112, 521
       117, 78
                                                  Thalassemia
Tetradecapeptides
                                                    B-, detection by DNA restriction
  synthetic, correspondence to amino
                                                         endonuclease analysis in Algerian
       acid sequence 31-44 of growth
                                                         patients, 113, 269
       hormone, stimulation of glucose
                                                  Theophylline
       uptake by adipose tissues (rat),
       110, 866
                                                    inhibitory effects on low-density
                                                         lipoprotein binding and inter-
Tetrahydrobiopterin
                                                         nalization, synthesis of choles-
```

biosynthesis, tetrahydro-sepiapterin

Subject Index

Thioredoxins terol and cholesteryl esters (human fibroblasts), 112, 795 fructose-1,6-bisphosphatase activation, inhibition by spermidine Thermolysin and spermine (spinach chlorothermophilic cytochrome oxidase plasts), <u>115</u>, 707 f-type, amino acid sequence (spinach proteolysis without affecting proton-pumping and oxidase activchloroplast), <u>115</u>, 1 m-type, amino acid sequence (spinach ities, 113, 575 Thiamin chloroplast), 115, 1 H-D exchange reaction, indole ring Thiosulfate and thiazolium ring stackingintermediate in bisulfite reduction interaction effect, 116, 486 by Desulfotomaculum nigrificans Thiazolium ring cell extracts, 117, 530 and indole ring, stacking interaction, effect on thiamin Thiosulfate sulfurtransferase H-D exchange reaction, 116, 486 apolar interaction with octyl Thieno[2,3-g]pteridines substituted agarose gel (bovine as molybdenum cofactor oxidation liver), <u>111</u>, 595 4-Thiouridine-5'-monophosphate products, isolation from nitrate reductase (Escherichia coli) and transformation to uridine-5'-monoxanthine oxidase (bovine milk), phosphate in tRNA, induction by enzymatically generated excited 111, 537 molecules (Escherichia coli), Thiocystine ³⁵S-labeled, sulfur incorporation 117, 923 into biotin (Escherichia coli), Thrombin 110, 243 activity modulation by plasma protein Thioglycolic acid ethyl ester (human), 116, 189 -Co and Fe tetraphenylporphyrin binding to platelets and serotonin complexes, superoxide generation, secretion induction, inhibition α-tocopherol and γ-oryzanol reacby 74,000-dalton protein from tion kinetics, 115, 1002 platelet membranes (human), $\underline{112}$, 228 Thiol groups free induction of 27,000-dalton protein in α-amylase sequence, localization phosphorylation in resting (porcine pancreas), $\underline{110}$, 726 platelets (human) and lung fibrorelease by ap-macroglobulin blasts (hamster), <u>111</u>, 1034 complexes with proteinases, loplatelet activation calization near complex surface, arachidonic acid release, unaffected 111, 964 by diglyceride/monoglyceride lipase pathway inhibition (human), Thiolactomycin <u>113</u>, 241 inhibition of Escherichia coli fatty cAMP inhibitory effect (human), acid synthesis, mechanism (Nocar-<u>112</u>, 693 dia sp. No. 2-200), 115, $11\overline{08}$ cytoplasmic Ca²⁺ increase, Thiol protease iC3b forming, isolation (guinea pig prevention by adenylate cyclase stimulators (human), 113, 598 polymorphonuclear leukocytes), 117, 413 effects on phosphoinositide Thiol proteinase inhibitors metabolism (human), 110, 108 polyphosphoinositide increase, amino acid sequence (rat liver), 115, parallel release of N-acetyl-g-D-902 glucosaminidase (human), 110, 660 α_1 and α_2 , from human plasma, triphosphoinositide breakdown and inhibition of Ca²⁺-activated dense body release (human), 116, neutral protease from muscle. 513 110, 256 -released platelet-derived growth Thiol-protein disulfide oxidoreductase, factor and freeze-thawed outdated see Protein-disulfide reductase concentrates, comparison (human), (glutathione) 116, 809 Thiols Thromboxane A₃ -containing peptide-hemin complexes, formation after eicosapentaenoic acid cytochrome P-450 models (bovine), ingestion (human platelets), 116, 115, 590

1091

```
Thyroid-stimulating hormone (TSH), see
Thromboxane B<sub>2</sub>
 Ca ionophore-induced formation,
                                                    Thyrotropin
      inhibition by imidazo[1,5-a]pyri-
                                              Thyrotropin
      dine-5-hexanoic acid (human
                                                effect on glycosaminoglycan synthesis
      platelets), 112, 899
                                                    in thyroid cell culture (por-
Thromboxane synthetase
                                                    cine), 111, 353
  inhibition by imidazo[1,5-a]pyridine-
                                                interaction with membrane receptor
      5-hexanoic acid in isolated
                                                    glycoprotein component, fluores-
      platelets (human) and in vivo
                                                    cence study (rat thyroid cells),
      (rat), 112, 899
                                                    110, 48
  inhibitors, effect on virus
                                                post-transcriptional effect on
      replication in fibroblasts (human
                                                    nuclear and cytoplasmic thyro-
      lung), <u>116</u>, 264
                                                    globulin mRNA (porcine thyroid
                                                    cells), <u>116</u>, 55
Thylakoids
  inside-out vesicles, washed by EDTA to remove Mn<sup>2+</sup> and surface pro-
                                                release by pituitary fragments in
                                                    vitro induced by thyrotropin-re-
      teins, inhibition of oxygen evo-
                                                    Teasing hormone, inhibition by
      lution (pea chloroplasts), 110,
                                                    neurotensin (rat), 113, 248
                                              Thyrotropin receptors
      545
                                                defective in 1-8 rat thyroid tumor
  photosystem II particles, oxygen
      evolution reversible inhibition
                                                    line, function reconstitution by
      by NaCl washing, role of 23,000-
                                                    higher order gangliosides, 110,
      dalton protein, <u>113</u>, 738
                                                    77Ž
Thymidine kinase
                                                glycoprotein component interaction
                                                    with thyrotropin, fluorescence
  cytosolic in hepatoma, increased
      concentration in comparison with
                                                    study (rat thyroid cells), 110, 48
      liver (rat), <u>111</u>, 280
                                              Thyrotropin-releasing hormone
                                                5-fluoroimidazole analog, synthesis
  induction in thymidine kinase-
      deficient mouse L cells by DNA-
                                                    and biological activity, 113, 581
      mediated gene transfer, enhance-
                                                thyrotropin release induction from
                                                    pituitary fragments in vitro, in-
      ment by verapamil and diltiazem,
                                                    hibition by neurotensin (rat),
      110, 783
  inhibition by 3-aminobenzamide,
                                                    113, 248
      β-lapachone, and aphidicolin
                                              Thyrotropin-releasing hormone receptors
                                                biochemistry and autoradiography
      after methyl methane sulfonate
      DNA damage (human), 117, 30
                                                     (rabbit spinal cord), 116, 669
                                              Thyroxine
  lectin-treated, inhibition of tumor
                                                -binding protein, characterization in
      promoter-induced proliferation by
                                                    brain cytosol primary cultures
                                                     (rat embryo), 116, 901
      agents increasing cellular cAMP,
                                                effect on neurotensin content in
      mechanism (mouse), 114, 93
  oxidized with NaIO4 or galactose
                                                    pituitary and hypothalamus in vi-
                                                    <u>vo</u> (rat), <u>113</u>, 248
      oxidase, surface glycoconjugate
                                              Tiazole derivatives
      fluorescence labeling with Luci-
                                                AH 22216, gastric histamine H<sub>2</sub>
      fer yellow CH (mouse), 112, 872
                                                    receptor inhibition (HGT-1
Thyroglobulin
                                                    cells), <u>116</u>, 251
  interaction specificity with thyroid
                                              Tiçhorzianine 🗚
      cells and membranes (mammalian),
                                                <sup>1</sup>H NMR spectra (<u>Trichoderma</u>
      114, 962
                                                    harzianum), 116, 1
  mRNA sequences in nucleus and
                                              α-Tocopherol
      cytoplasm, thyrotropin post-
                                                and superoxide generated by
      transcriptional effect (porcine),
                                                    cytochrome P-450 model system,
      116, 55
                                                    reaction kinetics, 115, 1002
  radioiodinated in vivo and in vitro,
                                              Topoisomerase I
      amino acid sequence around tyro-
                                                phosphorylation in vitro by protein
      sine residue in N-terminal region
                                                     kinase causing activity increase
      (human), 114, 73
                                                     (Novikoff hepatoma), 111, 897
  triiodothyronine-containing peptide,
                                                supercoiled DNA relaxation, inhibi-
      isolation and amino acid sequen-
                                                     tion by 2-6-dimethyl-9-hydroxy-
      cing (porcine), 112, 206
                                                    ellipticinium (Trypanosoma
Thyroid peroxidase, see Todide per-
                                                    cruzi), 117, 1
      oxidase
```

```
by chromaffin granules (bovine
Topoisomerase II
                                                 adrenal medulla), <u>113</u>, 908 stimulation of Ca<sup>2+</sup> uptake by
  purified from Pseudomonas aeruginosa,
      high resistance to nalidixic
      acid, 110, 694
                                                     sperm, mechanism of calmodulin
Tosylamino-phenylethyl sulfonyl fluoride
                                                     involvement (porcine), 114, 28
  inhibition of chromatin solubiliza-
                                               Triglucosyl monoalkylmonoacylglycerol
      tion (rabbit thymus nuclei), 110,
                                                 enzymatic sulfation, kinetics (rat
                                                     salivary glands), 113, 817
Tosyl-lysine chloromethyl ketone
                                              Triglycerides
  inhibition of chromatin solubili-
                                                 formation increase by high carbo-
      zation (rabbit thymus nuclei),
                                                     hydrate low fat diet (rat liver),
      <u>110</u>, 216
                                                     113, 888
Toxicity
                                               Trigonelline
  metal, and calmodulin inhibition in
                                                 demethylation by cell-free extracts
      vitro (bovine brain), 115, 106
Toxins, see also Neurotoxins, specific
                                                   animals, plants, and microorgan-
      toxins
                                                     isms, 113, 569
                                                   porcine liver, enzyme character-
ization, <u>113</u>, 569
  from Helminthosporium carbonum,
      structure and conformation, 111,
      398; 113, 10
                                               Triiodothyronine
Transferrin
                                                 -binding protein, characterization in
  recycling in reticulocytes, effect on
                                                     brain cytosol primary cultures (rat embryo), 116, 901
      NH<sub>4</sub>Cl (rat), <u>113</u>, 650
Transformation
                                                 stimulation of
  Aspergillus nidulans from pyrimidine
                                                   chromatin solubility in hepatic
      auxotrophy to phototrophy, induc-
                                                     nuclei (rat), <u>110</u>, 61
      tion by orotidine-5'-phosphate
                                                   neurotensin release by hypothalamic
      decarboxylase gene segment from
                                                     fragements in vitro (rat), 113,
      Neurospora crassa, 112, 284
                                                     248
                                               Triiodothyronine receptors
  carrier DNA-free of Chinese hamster
                                                 low level in glial nuclei during
      cells by plasmids pSV2qpt and
                                                     brain development (chicken em-
      pNE03, 110, 593
                                                     bryo), <u>112</u>, 221
  induction by Rous sarcoma virus
                                                 number increase in neuronal nuclei
      temperature-sensitive mutant,
                                                     during brain development (chicken
      role of calmodulin receptors,
                                                     embryo), 112, 221
      112, 647
                                               Trimethionine
Triamcinolone acetonide
                                                 uptake inhibition by photoaffinity
  effect on androgen-stimulated
                                                     label, 4-azidobenzoyltrimethio-
      production of androgen receptors
                                                     nine (Candida albicans), 110, 884
       (rat prostate, hamster ductus
      deferens clone tumor cells), <u>116</u>,
                                              Trimethylamine
      1020
                                                oxidation by microsomal carbon
Tribenzylphosphate
                                                     monoxide-sensitive monooxygenase
  inhibition of phosphate active
                                                     in cell-free extracts (Candida
      transport and oligomycin-sensi-
                                                     boidinii), 113, 900
      tive ATP synthesis (yeast mito-
                                              Tripeptides
      chondria), 113, 751
                                                synthetic with varied amino acid
                                                     residues at positions 2 and 3.
Triethylenetetramine
                                                     substrates for amidating enzyme
  Cu-chelating, plasma ferroxidase
      decrease without anemia induction
                                                     from porcine pituitary, 112, 372
(rat), <u>113</u>, 127
Triethyltin bromide
                                              Triphosphoinositides
                                                breakdown and dense body release in
  in glutathione transferase, isozyme
                                                     thrombin-activated platelets (hu-
      discrimination (rat liver), 114,
                                                     man), 116, 513
      829
                                                thrombin-induced increase in
Trifluoperazine
                                                     platelets, time course (human),
  inhibition of
                                                     110, 660
    A23187-induced production of
                                              Tris
      prostaglandins and cAMP by macro-
                                                effect on guanine nucleotide regu-
      phages, mechanism (rat), 114, 248
                                                     lation of quinuclidinyl ben-
    synexin activity and secretion
                                                     zilate binding to muscarinic
```

```
T-kinin liberation (rat), 112, 701
      acetylcholine receptors (canine,
      frog. mouse, rat heart), 113, 280
                                                thermophilic cytochrome oxidase
Trithionate
                                                     proteolysis without affect on
                                                     proton-pumping and oxidase acti-
  intermediate in bisulfite reduction
                                                     vities, 113, 575
      by Desulfotomaculum nigrificans
                                              Tryptic peptides
      cell extracts, 117, 530
                                                collagen, pyridinoline crosslinks in
Tritin
                                                     nonmineralized (chicken), 113, 975
  protein synthesis inhibitor from
      wheat, identical antigenic deter-
                                              Tryptophan
      minants with inhibitors from bar-
                                                fluorescence
      ley and rye, 114, 190
                                                  in oligomycin-sensitive ATPase,
Triton X-100
                                                     temperature effects (bovine car-
  solubilization of
                                                     diac submitochondrial particles),
    crude synaptic membranes from
                                                     111, 366
      spinal cord, glycine receptor en-
                                                  quantum yield in enkephalin cyclic
      richment (rat), 112, 809
                                                     analogs, 114, 268
    glucose transporter, Na<sup>+</sup> effect
                                                -7-methylguanine systems, stacking
       (porcine renal brush border),
                                                     interactions, mRNA model, 115, 849
      112, 444
                                              Tryptophan synthase
    synaptosomes, concanavalin A
                                                pyridoxal 5'-phosphate binding, ^{31}P
      binding increase (calf brain),
                                                     NMR study (Escherichia coli),
      110, 804
                                                     111, 817
Tropomyosin
                                              Tubulin
  subunits \alpha and \beta, different in
                                                assembly, dapsone effect (bovine brain), 116, 128
      fast and slow skeletal muscles
       (chicken), 110, 147
                                                bound to colchicine derivatives
  -troponin binding, Ca regulation
                                                     coupled to CNBr-Sepharose 4B,
       (reconstituted thin filament),
                                                     elution with sodium chloride (rat
      114, 447
                                                     pancreas), <u>111</u>, 253
Troponin
                                                 coated vesicle major constituent
  B-cell, synthesis and biological
                                                     (bovine brain), <u>115</u>, 303
  activity, 114, 763
-tropomyosin binding, Ca regulation
                                                 -colchicine binding
                                                   enhancement by poly(L-lysine).
       (reconstituted thin filament).
                                                     mechanism (caprine brain), 113,
      114, 447
                                                     384
Troponin C
                                                   at 5°C (bovine renal medulla),
  Ca<sup>2+</sup> binding, effect on enthalpy,
                                                     116, 866
      entropy, and heat capacity (bo-
                                                 denaturated, inhibition of micro-
      vine heart), 114, 162
                                                     tubule assembly from active
  hydrophobic site localization with
                                                     subunits (porcine brain), 110, 463
      tryptic fragments (rabbit skele-
                                                 mRNA accumulation, induction by gangliosides (neurohybrid clone
      tal muscle), 115, 87
Tropomyosin
                                                     SB21B1 cells), 116, 974
  single form in fibre type IIM in
      jaw-closer muscles (feline), <u>113</u>,
519
                                              Tumor cells, see also specific tumor
                                                     cells
                                                methionine dependence (human), 117,
Trypanosoma equiperdum
  surface glycoprotein C-terminal end,
                                                retinoid-binding proteins, HPLC
      composition study, 114, 119
                                                     detection (human breasts, ovary,
  variant-specific surface antigens
                                                     murine melanoma), 116, 75
      from clones, isolation and
                                              Turpentine
      characterization, 110, 491
                                                 acute inflammation induction, α-feto-
Trypsin
                                                     protein decrease and hapto-
  complex with a2-macroglobulin,
                                                     globulin increase in serum
      free thiol group release and lo-
                                                     (newborn rats), 110, 796
      calization, 111, 964
                                              Type IV glycogen storage disease
  immobilized on collagen membrane,
      chromatin organization, 114, 1169
                                                 skin fibroblast glycogen branching
                                                     enzyme, decrease of activity and
  plasma treatment
                                                     sensitivity to anti-enzyme IgG
    C-peptidase immunoreactivity
                                                     antibodies (human), 111, 636
       increase (human), 111, 785
```

Tyrosine	cholanthrene induction (rabbit
fluorescence quantum yield in	hepatic microsomes), <u>111</u> , 219
enkephalin cyclic analogs, 114,	stimulation by choline-deficient diet,
268	mechanism (rat hepatic micro-
free radicals, generation by ribo-	somes), 114, 418
nucleotide reductase incubated	Ultraviolet (uv)
with dithiothreitol and Fe with	-damaged simian virus 40 minichromo-
air (calf thymus), <u>110</u> , 859	somes, DNA repair endonuclease
iodination, mechanism, $\overline{116}$, 639	activity, <u>113</u> , 309
NBD-labeled residue in MF ₁ -ATPase,	DNA-chromosomal protein crosslinking
identification (bovinë heart),	(HeLa cells), <u>114</u> , 767
116, 599 phosphorylation	DNA photoproduct induction, compari-
effect of 12-0-tetradecanoylphor-	son in developing forespores
bol-13-acetate (chicken embryo	(Bacillus megaterium, B. subti- lis), 113, 618
fibroblasts), 115, 536	effect on deoxynucleoside triphosphate
in membranes from erythroleukemia	pools (Chinese hamster V79
cells, stimulation by dimethyl	cells), 114, 458
sulfoxide (mouse), <u>112</u> , 413	-induced changes in deoxynucleoside
-specific protein kinase, activity	triphosphate pools, kinetics,
(purified rat Leydig cells), 116 ,	effect on DNA synthesis measure-
400	ments (Chinese hamster ovary),
Tyrosine aminotransferase	116, 1064
in fetal liver, stimulation by	inhibition of
5-azacytidine (rat), 113, 645 Tyrosine hydroxylase, see Tyrosine	DNA excision repair associated with
3-monooxygenase	cell membrane fluidity changes
Tyrosine 3-monooxygenase	(Escherichia coli), 110, 609 replication, dTTP increase and
inactivation by reduced pterins	dCTP decrease (Chinese hamster
(rat), <u>117</u> , 894	ovary cells), 114, 34
	trimethionine uptake, irreversible,
	with photoaffinity label (Candida
U	albicans) 110, 884
Hill Control of the C	long wavelength, with 8-methoxy-
Ubiquinol-cytochrome c reductase	psoralen, differential inhibition
antimycin A-insensitive in chroma-	of DNA, RNA, and protein synthe-
tophores, purification and prop- erties (Rhodopseudomonas	sis (L1210 cells), <u>112</u> , 965
sphaeroides), 112, 450	-mediated SOS system induction, cellu- lar ATP pool evolution (Escheri-
-cytochrome c interaction, role of	chia coli), 117, 556
carboxyl groups (bovine heart),	mutation induction by DNA crosslinks
116, 272	(Deinococcus radiodurans), 112,
Ubiquinone	458
azido derivatives, synthesis,	Urea
biological activity, <u>113</u> , 477	effect on progesterone receptors
Ubiquinone-cytochrome c oxidoreductase,	(chick oviduct), <u>114</u> , 479
<u>see</u> Ubiquinol-cytochrome <u>c</u>	Urease
reductase Ubiquinone 8	nickel K edge, X-ray absorption
conversion from 2-octaprenylphenol by	spectra, comparison with model
hydroxylating system of membrane-	compounds (jack bean), <u>112</u> , 279 Uremia
bound cytochrome O and cytoplas-	ionophorous fraction in plasma,
mic cytochrome c reductase	normal urine comparison (human),
(Escherichia coli), 111, 830	111, 326
UDP-glucose	Uridine-5'-monophosphate
in adenocarcinoma cells, decrease	from 4-thiouridine-5'-monophosphate
during glucose starvation (hu-	in tRNA, induction by enzyma-
man), <u>110</u> , 371	tically generated excited mole-
UDPglucuronosyltransferase	cules (Escherichia coli), 117, 923
activity with p-nitrophenol substrate, induction by ethanol, comparison	Uridine transport
with phenobarbital and 3-methyl-	nitrobenzylthioinosine-insensitive
on phonoder broat and 5-metry 14	component in lymphoblastoid and

leukemia cells (human, murine), Urine platelet-activating factor in newborns and adults (human), 113, 51 Urokinase interaction with Na-benzoyl-L-arginine amide, effect on specific SS bond reduction (human), 112, 754 Uteroglobin amino acid sequence, homology with rat prostatic binding protein (rabbit), 114, 325 synthesis, regulation during prolonged progesterone administration (immature rabbit uterus), 115, 1015 UTP (uridine 5'-triphosphate) GTP-dependent stimulation of initiation complex formation with initiation factor (Streptomyces

٧

aurefaciens), 114, 222

Vacidin

and lipid vesicle interaction, circular dichroism spectroscopy, <u>116</u>, 520

Valproic acid

effect on fatty acid oxidation (isolated rat hepatocytes), 115,

Vanadate

facilitation of [3H]ouabain binding to Na⁺,K⁺-ATPase, ouabain binding site determination in small muscle biopsies (rat), 111,

insulin-like effect on adipocytes, stimulation of glycogen synthase and phosphorylation of 95,000dalton insulin receptor subunit (rat), 113, 80 Vanadium ions

inhibition of Na⁺, K⁺-ATPase, and electrogenic (Na⁺, K⁺) pump, bleomycin effects (rat brain, skeletal muscle), 116, 783

Vasoactive intestinal peptide (VIP) in brain and gastrointestinal tract during postnatal development, radioimmunoassay (rat), 112, 891

induction of cAMP accumulation in pancreatic adenocarcinoma cells during differentiation in culture (human), <u>111</u>, 958

Vasoactive intestinal peptide receptors cAMP response in pancreatic adenocarcinoma cells, increase during

differentiation in culture (human), 111, 958

Vasoactive peptides

purification from Murphy-Sturm lymphosarcoma acid protease action on rat plasma kininogen, 112, 621

Vasopressin

-like hormones, multigene family (Macropus fuliginosus pituitary gland), 116, 258

-receptor complexes, ligand-stabilized, solubilization from plasma membrane (bovine kidney, rat liver), 116, 91

[Lys8]Vasopressin

identification (Macropus fuliginosus posterior pituitary gland), 116,

[Phe8]Vasopressin

identification (Macropus fuliginosus posterior pituitary gland), 116, 258

Verapamil

enhancement of plasmid DNA-mediated transformation of mouse cells by gene for herpes simplex virus thymidine kinase, 110, 783 inhibition of A23187-induced macro-

phage production of prostaglandins and cAMP, mechanism (rat), 114, 248

Vesicular stomatitis virus

HeLa cell infection, effect of microinjected human interferon B, 110,

neutralized, host cell binding, phosphatidylserine effect (rabbit), 114, 774

NS protein, specific noncovalent binding of GDP, inhibition by ATP, 114, 138 released from interferon-treated

cells, low infectivity mechanism, glycoprotein deficiency role (human, murine), 117, 161 ribonucleoprotein, virus production

and release after microinjection (vero cells), <u>116</u>, 1160

Vibrio alginolyticus

mutants defective in respirationcoupled Na⁺ pump, isolation, <u>114</u>, 113

Vibrio cholera

furazolidone-induced prophage and filament formation, inhibition by chloramphenicol, 112, 1106

Vimentin

degradation by Ca⁺²-activated proteinase (calf lens), 116, 204

Vinblastine

inhibition of mitochondrial aspartate aminotransferase precursor mat-

Subject Index

uration (chicken embryo fibroproduction in cultured fibroblasts and keratinocytes (human), 115, blast), 115, 144 Vincristine Vitamin K inhibition of mitochondrial aspartate -dependent aminotransferase precursor maturation (chicken embryo fibrocarboxylation, diastereoisomeric y-methylglutamic acidblast), 115, 144 Vinculin containing pentapeptide substrates (rat hepatic microsomes), -binding proteins, high molecular weight, electroblot-overlay de-113, 454 tection (various muscle, proteins, warfarin-induced nonmuscle tissues), 116, 1026 accumulation (rat), 114, 991 Vitellogenin VIP, see Vasoactive intestinal peptide estrogen-induced synthesis, inhibiinfection, interferon and prostation by tamoxifen, vitellogenin glandins, antiviral action relamRNA synthesis correlation (chicken liver), 112, 425 tionship (murine cells), 116, 442 forms I and II, differential re-Virus replication effect of thromboxane synthetase sponsiveness during primary and inhibitors (human lung fibrosecondary estrogen stimulation blasts), 116, 264 (chicken liver, plasma), 112, 1049 Viscometry DNA, effects of meso-tetra(4--N-methylpyridyl)porphine and Warfarin Zn^{2+} , Ni^{2+} derivatives, 113, -induced accumulation of vitamin 148 K-dependent proteins (rat), 114, Vitamin A 991 as retinol or retinoic acid, collagen synthesis stimulation in corneal -lipid interface, mediation epithelial cell culture (rabbit), of ionophore conformational 114, 395 change, 114, 632 Vitamin B Water-oxidation system phosphorylated, substrate for nucleophotoactivation, Ca²⁺ effect (darksidediphosphatase, cluster analysis (rat hepatocyte Golgi fracgrown Picea abies chloroplasts). tion), 113, 178; erratum, 114, 116, 803 1200 Wheat germ agglutinin Vitamin B₁₂ binding to 0-(4-methylumbelliferyl)inactivation by nitrous oxide, effect glycosides, effect on fluoreson folate-dependent transformylcence, 110, 926 inhibition of Friend erythroleukemia ases in purine synthesis (rat liver), 112, 327 cell differentiation induced by Vitamin D dimethyl sulfoxide, 110, 228 -binding proteins, carbohydrate chain, Whey acidic protein isolation and characterization mRNA 5'-terminal sequence, 18-S rRNA (human), 117, 324 3'-end interaction sites (mouse), 116, 167 Vitamin D3, see also Dihydroxyvitamin χ deficiency, y-carboxyglutamic acid decrease in femoral bone and Xanthine oxidase renal cortex (rat), 113, 294 acetaldehyde aerobic oxidation. metabolites leukotriene inactivation by in epididymal tissues, 24,25generated hydroxyl radicals, 110, dihydroxyvitamin D3 accumula-266 tion in causa region (rat), 113, fluorescent oxidation product of recognition by monoclonal antibody molybdenum cofactor, identificawith high affinity to 1,25-di-

hydroxycholecalciferol, 112, 431

tion as thieno[2,3-g]pterine

derivative (bovine milk), 111, 537

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS

XCP, <u>see</u> Factor X coagulant protein X-ray absorption edge spectroscopy Cu(I) determination in Cu complexes of T2D laccase (Rhus vernicifera), 112, 737

in EXAFS

region, binuclear Cu site in met T2D laccase and azide-bound derivative (Rhus vernicifera), 112, 737

and XANES regions, Ni in urease and model compounds, comparison, 112, 279

112, 279 X-ray diffraction

molecular structure of protected analog of C-terminal dipeptide of gramicidin A, <u>112</u>, 1056

X-ray microanalysis

elemental content in myocyte nuclei, cytoplasm, and mitochondriaenriched cytoplasm, comparison between Snell dwarf and normal mice, 114, 234

X rays

DNA repair induction, reconstitution phases (L1210 cells), 112, 1077

Z

Zinc ions

binding, calmodulin and S100b protein (human brain), <u>114</u>, 1138; erratum, 115, 769

erratum, 115, 769 -concanavalin A solutions, 67Zn NMR, 115, 22

Cu(II) or Ni(II) substitution, effect on aminopeptidase activity (Aeromonas), 114, 646

effect on methallothionein Stokes radius (rat liver), 114, 998 noncompetitive inhibition of dinucle-osidetetraphosphatase, reversal by EDTA, kinetics, 113, 717

Zymogens

vitamin K-dependent plasma, ßhydroxyasparatic acid residue (bovine, human), 115, 8

Zymosan

induction of lysosomal hexosaminidase secretion by macrophages, mannose-glycoprotein receptor role (mouse), 113, 192