Subject Index

Volume 4

A	Biosynthesis flavanone, naringin isomerization, 4, 259
Active site homology	presqualene alcohol, 4, 279
between carbonic anhydrase and β -lipotropi	n Bisulfite
hormone, 4 , 290	buffers, halocytosine dehalogenation, 4, 72
Acyl	Bitterness
intramolecular transfer, 4, 84	taste of isomeric naringins, 4, 259
Adenosine diphosphatase	Brominative cyclization
activity, liver membranes (rat), 4, 181	polyenes, 4, 188
Adenosine triphosphatase	
activity, liver membranes (rat), 4, 181	
Adenosine 5'-triphosphate	C
nonenzymatic hydrolysis, 4, 250	C
Aggregation	Carbonic anhydrase
hemochromogen, effect of inorganic salts, 4	active site homology, 4, 290
326	Carboxypeptidase A
Alkaloids	mechanism, 4, 270
biomimetic synthesis, 4, 110	Catalysis
N-Alkylformimidoyl cyanide	multifunctional hydrolytic, 4, 136
dimerization, 4, 407	Chirality
Amide	3-hydroxyoctadecanoic acid from stearoyl
torsional strain activation, 4, 270	CoA (rat), 4, 64
Amines	Cholestane
catalysts for isomerization of △5-ketosteroids	derivatives, biological demethylation, 4, 363
4, 41	Circular dichroism
Amino acids	C-2 chirality of naringin, 4, 259
thermal polymerization, 4, 385	Copper-histidine
Aminolysis	complex, 4, 30
oxalate esters in toluene, 4, 194	Corn
Aminomalonates	roots, curvature from malformin A, 4, 93
B ₆ -catalyzed reactions, 4, 132	Cyclization
Arylhydroxylamine	biomimetic, 4, 342
rearrangement, mechanism (rat), 4, 58	Cyclization
Arylhydroxylurea	in desthiomalformin synthesis, 4, 212
enzymatic and nonenzymatic cyclization	Cyclodextrins
(rat), 4, 58	modified, catalysis of ester hydrolysis, 4, 237
Aspergillus niger	Cyclodimerization
malformin A from, 4, 93	nonoccurrence in desthiomalformin synthesis
Atabrine	4, 212
optically active, 4, 106	Cyclohexaamylose - N - (2 - dimethylaminoethyl)
Azide	acetohydroxamic acid
cyclization, 4, 93	catalysis of ester hydrolysis, 4, 237
	Cyclohexaamylose-N-(4-imidazolemethyl)aceto-
В	hydroxamic acid
	catalysis of ester hydrolysis, 4, 237
Biomimetic cyclization	Cyclohexane
D-homosteroid nucleus from, 4, 342	hydroxylation, chemical model, 4, 307
Copyright © 1975 by Academic Press, Inc. All rights of reproduction in any form reserved. Printed in Great Britain	412

Cyclopentapeptide

desthiomalformin, synthesis and properties, 4, 212

Cyclopentapeptide disulfide

in malformin A synthesis, 4, 93

D

Dehalogenation

halocytosines, by bisulfite buffers, multistep pathway, 4, 72

Desthiomalformin

cyclopentapeptide, synthesis and properties, 4, 212

Deuterium oxide

solvent isotope effect, catalysis of ester hydrolysis by N-(2-dimethylaminoethyl)-hydroxamic acid, **4**, 219

Dimerization

N-alkylforminidoyl cyanide, 4, 407

N-(2-Dimethylaminoethyl)acetohydroxamic acid catalysis of nitrophenyl ester hydrolysis, **4**, 219 Demethylation

steroids, by liver enzymes (rat), 4, 363

1,3-Dimethyl-2-(*trans*,*trans*-7,11-dimethyl-3,7,11-dodecatrienyl)-2-cyclohexenol cyclization, **4**, 342

E

Enzyme

system, for cyclohexane hydroxylation, **4**, 307 Ethenoadenosine

derivatives, fluorescent: chemical characterization and biological activities, 4, 181

F

Fluorescence

quinacrine mustards and atabrines, **4**, 106 Formaldehyde

reaction with histidine residues of proteins, 4, 22

G

General base catalysis

catalysis of ester hydrolysis by N-(2-dimethyl-aminoethyl)hydroxamic acid, 4, 219

Grapefruit

taste of isomeric naringins, 4, 259

Н

Halocytosines

dehalogenation by bisulfite buffers, multistep pathway, 4, 72

Hemochromogen

aggregation, effect of inorganic salts, 4, 326 Histidine

alkylation, kinetics, 4, 30

residues, reaction with formaldehyde, 4, 22
N-substituted, effect on bimolecular lipid
membranes, 4, 317

D-Homosteroid nucleus

biomimetic synthesis, 4, 342

Hydrolysis

catalyzed by mercury complexes, **4**, 149 ester, catalyzed by modified cyclodextrins, **4**, 237

nitrophenyl ester, catalyzed by N-(2-dimethyl-aminoethyl)hydroxamic acid, **4**, 219

nonenzymatic, ATP, 4, 250

Hydrophobic interaction

hemochromogen aggregation, 4, 326

Hydroxamic acid

in multifunctional hydrolytic catalysis, 4, 136

Hydroxylamine

aromatic, rearrangement (rat), 4, 58

Hydroxylation

enzymic, model, 4, 307

Hydroxyl group

in acyl transfer, 4, 84

2-Hydroxymethyl-4-nitrophenyl trimethylacetate acyl transfer, 4, 84

2-Hydroxy-5-nitrobenzyl lysozyme

inactive, reactivation of lysozyme from, 4, 1

3-Hydroxyoctadecanoic acid from stearoyl-CoA, chirality, 4, 64

I

Imidazole

in multifunctional hydrolytic catalysis, 4, 136 nitrogen reactivity, 4, 30

Imine

intermediate, in isomerization of △5-3-ketosteroids, 4, 41

Inorganic salts

hemochromogen aggregation, effect, **4**, 326 Isomerization

 Δ^5 -3-ketosteroids by amines, 4, 41

Isotope effect

solvent, on ribonuclease, 4, 392

K

14-3-Ketosteroids

from ∆5-3-ketosteroids and amines, 4, 41

∆⁵-3-Ketosteroids

isomerization by amines, 4, 41

${f L}$	Nicotinamide adenine dinucleotide
Lipid	derivative, chemical characterization and bio-
membranes, bimolecular: proton conduction	logical activities, 4, 181
across, 4, 317	Nicotinamide adenine dinucleotide glycohydrol-
Liposomes	ase
efflux of solutes, 4, 317	activity, liver membranes (rat), 4, 181
β-Lipotropin hormone	Nicotinamide adenine dinucleotide pyrophos- phatase
active site homology, 4, 290	activity, liver membranes (rat), 4, 181
Liver	p-Nitrophenyl acetate
arylhydroxylamine isomerase from (rat), 4, 58	hydrolysis by polymer catalyst, 4 , 136
soluble enzymes, stearoyl-CoA oxidation (rat), 4, 64	reaction with lysine and lysine derivatives,
Lymphocytes	kinetics, 4, 299
interaction with optically active quinacrine and	Nuclear magnetic resonance spectra
atabrine, 4, 106	3-methylpent-2-eno lactone, 4, 166
Lysine	mevalonolactone isomers, 4, 166
reaction with p-nitrophenyl acetate, 4, 299	
Lysine derivatives	
reaction with p-nitrophenyl acetate, 4, 299	O
Lysozyme	Optical rotatory dispersion
activity from inactive 2-hydroxy-5-nitrobenzyl	curves, mevalonolactone isomers, 4, 166
lysozyme, 4, 1	3-methylpent-2-eno lactone, 4, 166
	Optical selectivity
M	ester hydrolysis by modified cyclodextrins, 4,
Malformin	237
parent compound of desthiomalformin, 4, 212	Oxalate ester
Malformin A	esters, aminolysis in toluene, 4, 194
structure and synthesis, 4, 93	Oxidative coupling
Membranes	reactions, intramolecular
bimolecular lipid, proton conduction across, 4,	electrochemical methods, 4, 110 iron-dimethylformamide and iron-dimethyl
317	sulfoxide complexes, 4, 110
[1-β-Mercaptopropionic acid, 2-(3,5-dibromotyrosine)]-8-lysine-vasopressin	phenols and nonphenols, 6, 110
oxytocin inhibitor, 4 , 377	Oxidative phosphorylation
synthesis and pharmacological properties, 4,	uncouplers, effect of N-substituted histidine, 4,
377	317
Mercury	Oxytocin
hydroxo-complexes of Hg ²⁺ chelates, 4, 149	inhibitor, $[1-\beta$ -mercaptopropionic acid, 2-(3,5-
24-Methylene sterol 24(28)-reductase	dibromotyrosine)]-8-lysine-vasopressin, 4,
from Saccharomyces cerevisiae, 4, 202	377
3-Methylpent-2-eno lactone	
from mevalonolactone, NMR and ORD, 4, 166	P
Mevaldate reductase	r
stereochemistry of catalysis by, 4 , 166	Penicillium brevi-compactum
Mevalonolactone isomers, NMR and ORD, 4, 166	metabolites, 4, 127
Mycophenolic acid	Peotide linkage
analogues, production from P. brevi-compac-	rehybridization, 4, 270
tum, 4, 127	Phenol
, ,	intramolecular oxidative coupling reactions, in alkaloid synthesis, 4, 110
N	Polyamines
Naringin	interaction of ATP with, 4, 250
C-2 stereochemistry, relation to taste and	Polyenes
biosynthesis in grapefruit, 4, 259	brominative ring closure, 4, 188

Polymer catalyst, hydrolysis, 4, 136 Polymerization thermal, amino acids, 4, 385 Presqualene alcohol stereochemistry, 4, 279 **Proteins** histidine residues, reaction with formaldehyde, 4, 22 Proteolytic enzymes mechanism, 4, 270 Proton transfer in ribonuclease conformation change, 4, 392

Pyroglutamic acid end group, thermal polymerization, 4, 385

Q

alkylating properties, model reaction, 4, 332

Ouinacrine optically active, 4, 106 o-Quinone methide intermediate, pyridoxol alkylating properties, 4, 332

R

Reactivation lysozyme from inactive 2-hydroxy-5-nitrobenzyl lysozyme, 4, 1 Ribonuclease alkylation, 4, 30 conformation change, 4, 392

S

Salts

Pvridoxol

inorganic, effect on hemochromogen aggregation, 4, 326

Stearoyl-CoA oxidation by soluble enzymes (rat liver), 4, 64 Stereochemistry C-2, naringin, 4, 259

presqualene alcohol, 4, 279 Steroids

biosynthesis, 4, 202 oxidative demethylation, 4, 363

Synthesis

[1- β -mercaptopropionic acid, 2-(3,5-dibromotyrosine)]-8-lysine-vasopressin, 4, 377

T

Terpenoids biosynthesis, 4, 202 bromine containing, biogenesis, 4, 188 mixed biosynthesis, 4, 127 Thermal polymers amino acids, 4, 385 Toluene oxalate ester aminolysis in, 4, 194 Torsional strain in mechanism of proteolytic enzymes, 4, 270 Transition state for ribonuclease conformation change, 4, 392

V

Vitamin B6 catalysis, aminomalonate reactions, 4, 132

Y

Yeast

Saccharomyces cerevisiae, 24-methylene sterol 24(28)-reductase from, 4, 202 Yeast alcohol dehydrogenase K_m , using ε -NAD as substrate, 4, 181