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- 729 Effects of tricyclic drug on induced circular dichroism  
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- VICTOR J. WROBLEWSKI 889 Mechanism of deiodination of  $^{125}$ I-human growth hormone *in vivo*. Relevance to the study of protein disposition
- MICHAEL C. CHANG, DIANA BERKERY,  
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- ABDULLA A.-B. BADAWY,  
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- 973 Electrically-evoked catecholamine release from cat adrenals. Role of cholinergic receptors

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- 979 The effects of assay temperature on the complex kinetics of acetaldehyde oxidation by aldehyde dehydrogenase from human erythrocytes

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- 985 4-Halo-3-hydroxyanthranilic acids: potent competitive inhibitors of 3-hydroxyanthranilic acid oxygenase *in vitro*

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- 991 Inhibition of carrageenan-induced paw edema by superoxide dismutase that binds to heparan sulfates on vascular endothelial cells

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- 997 The effect of estramustine derivatives on microtubule assembly *in vitro* depends on the charge of the substituent

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- 1007 *N*-Acetyltransferase polymorphism. Comparison of phenotype and genotype in humans

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- 1015 Compartmentation of intracellular folates. Failure to interconvert tetrahydrofolate cofactors to dihydrofolate in mitochondria of L1210 leukemia cells treated with trimetrexate

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- 1029 Effect of chronic hypoxia on acetaminophen metabolism in the rat

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- 1053 Effects of RP 52028 and phenobarbital on mRNA levels of inducible and constitutive sex-specific cytochrome P450 isozymes in rat liver

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- 1061 Metabolism of methylenedioxyphenyl compounds by rabbit liver preparations. Participation of different cytochrome P450 isozymes in the demethylenation reaction

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- 1069 Estimation of the kinetic constants for binding of epinephrine to  $\beta$ -adrenergic receptors of the S49 cell

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- 1087 Oxidation of specific SH protein of mitochondria by photodynamic action of hematoporphyrin. Relevance to uncoupling of oxidative phosphorylation

- STEVEN A. WRIGHTON,  
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- GUY G. CHABOT and  
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- YAN-CHUN ZHOU and  
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- TUR-FU HUANG, CHAO-ZONG LIU,  
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- EVELYNN A. BLANKSON,  
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- KAZUHIRO WATANABE,  
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- ZHEN Y. JIANG, QIONG-LIN ZHOU,  
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- BAKELA NARE, JAMES M. SMITH  
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- ROLF GAUSTAD, HELGE JOHNSEN  
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- JAMAL BAYAD, DENYSE BAGREL,  
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- ALEX BURNS, YIGUANG LIN,  
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- JEFFREY J. YOURICK and  
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- HANS-PIETRO EUGSTER,  
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- ERIC BIGNON, MICHEL PONS,  
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| SABHIYA MAJID,<br>KRISHAN L. KHANDUJA,<br>RAJINDER K. GANDHI,<br>SANJAY KAPUR and RATI R. SHARMA                            | 1441 | Influence of ellagic acid on antioxidant defense system and lipid peroxidation in mice                                                                                                                  |
| SHIGERU MURAKAMI,<br>MAKOTO MURAMATSU,<br>HIRONAKA AIHARA and<br>SUSUMU OTOMO                                               | 1447 | Inhibition of gastric H <sup>+</sup> ,K <sup>+</sup> -ATPase by the anti-ulcer agent, sofalcone                                                                                                         |
| M. C. MIQUEL, M. B. EMERIT,<br>H. GOZLAN and M. HAMON                                                                       | 1453 | Involvement of tryptophan residue(s) in the specific binding of agonists/antagonists to 5-HT <sub>3</sub> receptors in NG108-15 clonal cells                                                            |
| HAIM SCHUPPER and<br>PHILIP ROSENBERG                                                                                       | 1463 | Effects of diisopropyl phosphofluoridate, sarin and soman on the accessibility of proteins, in the electroplax membrane, to lactoperoxidase-catalyzed iodination                                        |
| ERIKA M. CRETTON and<br>JEAN-PIERRE SOMMADOSSI                                                                              | 1475 | Modulation of 3'-azido-3'-deoxythymidine catabolism by probenecid and acetaminophen in freshly isolated rat hepatocytes                                                                                 |
| IAN A. COTGREAVE,<br>PETER MOLDEUS, LARS ENGMAN<br>and ANDERS HALLBERG                                                      | 1481 | The correlation of the oxidation potentials of structurally related dibenzo[1,4]dichalcogenines to their antioxidance capacity in biological systems undergoing free radical-induced lipid peroxidation |
| PATRICIA S. FOXWORTHY and<br>PATRICK I. EACHO                                                                               | 1487 | Effect of the peroxisome proliferator LY171883 on triglyceride accumulation in rats fed a fat-free diet                                                                                                 |
| <b>Short Communications</b>                                                                                                 |      |                                                                                                                                                                                                         |
| HARRY GRIFFIN, DAWN WINDSOR<br>and JÜRGEN BORLAKOGLU                                                                        | 1493 | Changes in plasma lipoprotein metabolism in chicks in response to polychlorinated biphenyls (PCBs)                                                                                                      |
| HITOSHI HARADA,<br>YOSHIHITO KANAI, YUKARI TSUJI<br>and YASUNOBU SUKETA                                                     | 1495 | P <sub>2</sub> -Purinoceptors in a renal epithelial cell line (LLC-PK <sub>1</sub> )                                                                                                                    |

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| MICHAEL W. H. COUGHTRIE<br>and SHEILA SHARP             | 1497 | Glucuronidation of imipramine in rabbit and human liver microsomes: assay conditions and interaction with other tertiary amine drugs |
| EDWARD J. MACARAK,<br>KATHLEEN KUMOR and PAUL B. WEISZ  | 1502 | Sulfation and hemolytic activity of cyclodextrin                                                                                     |
| PAUL J. CIACCIO, KENNETH D. TEW<br>and FRANK P. LACRETA | 1504 | Enzymatic conjugation of chlorambucil with glutathione by human glutathione <i>S</i> -transferases and inhibition by ethacrynic acid |
| JULIA H. FENTEM and<br>JEFFREY R. FRY                   | 1508 | Effect of cimetidine on the metabolism of coumarin by rat, gerbil and human liver microsomes                                         |

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| HILDEGARD M. SCHÜLLER | 1511 | The signal transduction model of carcinogenesis |
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### Research Papers

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| DAVID J. McMANUS and<br>ANDREW J. GREENSHAW                                                                                     | 1525 | Differential effects of antidepressants on GABA <sub>B</sub> and $\beta$ -adrenergic receptors in rat cerebral cortex                                          |
| SARA E. LAMBARD, ALAN K. BURNETT,<br>C. ROLAND WOLF and JOHN A. CRAFT                                                           | 1529 | The role of specific cytochromes P450 in the formation of 7,12-dimethylbenz(a)anthracene-protein adducts in rat liver microsomes <i>in vitro</i>               |
| WALTER LOW, NAOMI BRAWARNICK<br>and HANNAH RAHAMIMOFF                                                                           | 1537 | The inhibitory effect of Mn <sup>2+</sup> on the ATP-dependent Ca <sup>2+</sup> pump in rat brain synaptic plasma membrane vesicles                            |
| JOHN M. DICKENSON and<br>STEPHEN J. HILL                                                                                        | 1545 | Histamine-stimulated increases in intracellular calcium in the smooth muscle cell line, DDT <sub>1</sub> MF-2                                                  |
| PETER P. KELDER, NICOLAAS J. DE MOL<br>and LAMBERT H. M. JANSSEN                                                                | 1551 | Mechanistic aspects of the oxidation of phenothiazine derivatives by methemoglobin in the presence of hydrogen peroxide                                        |
| ROY M. BREMNES, EIVIND SMELAND,<br>LARS SLØRDAL, ERIK WIST and<br>JARLE AARBAKKE                                                | 1561 | The effect of vindesine on methotrexate hydroxylation in the rat                                                                                               |
| L. BINDERUP, S. LATINI, E. BINDERUP,<br>C. BRETTEING, M. CALVERLEY and<br>K. HANSEN                                             | 1569 | 20-Epi-vitamin D <sub>3</sub> analogues: a novel class of potent regulators of cell growth and immune responses                                                |
| DIVYEN PATEL and<br>COLIN STEPHEN SCOTT                                                                                         | 1577 | Inhibitor studies of purified haemopoietic (myeloid) cell esterases. Evidence for the existence of distinct enzyme species                                     |
| HOWARD G. SHERTZER,<br>GERARD L. BANNENBERG,<br>MATS RUNDGREN and PETER MOLDEÚS                                                 | 1587 | Relationship of membrane fluidity, chemoprotection, and the intrinsic toxicity of butylated hydroxytoluene                                                     |
| GREGORY J. QUINLAN and<br>JOHN M. C. GUTTERIDGE                                                                                 | 1595 | DNA base damage by $\beta$ -lactam, tetracycline, bacitracin and rifamycin antibacterial antibiotics                                                           |
| CONSTANCE L. CHIK and<br>ANTHONY K. HO                                                                                          | 1601 | Inhibitory effects of ethanol on the calcium-dependent potentiation of vasoactive intestinal peptide-stimulated cAMP and cGMP accumulation in rat pinealocytes |
| ROBERT J. LINHARDT, ALI AL-HAKIM,<br>JIAN LIU, DEBRA HOPPENSTEADT,<br>GIUSEPPE MASCELLANI,<br>PIETRO BIANCHINI and JAWED FAREED | 1609 | Structural features of dermatan sulfates and their relationship to anticoagulant and antithrombotic activities                                                 |
| MARIANNE S. DE CARVALHO and<br>ROBERT S. JACOBS                                                                                 | 1621 | Two-step inactivation of bee venom phospholipase A <sub>2</sub> by scalaradial                                                                                 |

DEODUTTA ROY,  
BALARAMAN KALYANARAMAN  
and JOACHIM G. LIEHR

- 1627 Xanthine oxidase-catalyzed reduction of estrogen quinones to semiquinones and hydroquinones

### Short Communications

K. T. JAIRAM, I. HAVLIK and  
F. S. E. MONTEAGUDO

- 1633 Possible mechanism of action of desferrioxamine and 2,2'-bipyridyl on inhibiting the *in vitro* growth of *Plasmodium falciparum* (FCR 3 strain)

V. LECLERCQ-MEYER, A. G. AKKAN,  
J. MARCHAND and W. J. MALAISSE

- 1634 Effects of glimepiride and glibenclamide on insulin and glucagon secretion by the perfused rat pancreas

RAJINDER SINGH KLER,  
H. STANLEY A. SHERRATT,  
DOUGLASS M. TURNBULL  
and KLAUS MELDE

- 1637 Organic aciduria in fasted rats caused by 2-[6-(4-chlorophenoxy)hexyl]oxirane-2-carboxylate (etomoxir)

### Additions and Corrections

- 1641 Selective 3-hydroxylation deficiency of lidocaine and its metabolite in Dark Agouti rats. Vol. 42 (1991) 693-695. *Yasuhiro Masubuchi, Shin Umeda, Masato Chiba, Shoichi Fujita and Tokuji Suzuki*

### Announcement

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### Commentary

MARY H. RICHARDS

- 1645 Pharmacology and second messenger interactions of cloned muscarinic receptors

### Research Papers

SHIN-ICHI MIURA,  
MASAKUNI DEGAWA and  
YOSHIYUKI HASHIMOTO

- 1655 Renal and hepatic microsomal enzymes responsible for bioactivation of 3-methoxy-4-aminoazobenzene in the rodent

HIDESUKE FUKAZAWA,  
PEI-MING LI, CHII YAMAMOTO,  
YUKO MURAKAMI,  
SATOSHI MIZUNO and  
YOSHIMASA UEHARA

- 1661 Specific inhibition of cytoplasmic protein tyrosine kinases by herbimycin A *in vitro*

MIRANDA J. LAUGHTON,  
PATRICIA J. EVANS,  
MICHELE A. MORONEY,  
J. R. S. HOULT and  
BARRY HALLIWELL

- 1673 Inhibition of mammalian 5-lipoxygenase and cyclooxygenase by flavonoids and phenolic dietary additives. Relationship to antioxidant activity and to iron ion-reducing ability

PETRUS J. PAUWELS,  
PAUL VAN GOMPEL and  
JOSÉE E. LEYSEN

- 1683 Human  $\beta_1$ - and  $\beta_2$ -adrenergic receptor binding and mediated accumulation of cAMP in transfected Chinese hamster ovary cells. Profile of nebivolol and known  $\beta$ -adrenergic blockers

RICHARD J. KNOX,  
FRANK FRIEDLOS,  
TANIA MARCHBANK and  
JOHN J. ROBERTS

- 1691 Bioactivation of CB 1954: reaction of the active 4-hydroxylamino derivative with thioesters to form the ultimate DNA-DNA interstrand crosslinking species

AVNER RAMU, NILI RAMU and  
RAPHAEL GORODETSKY

- 1699 Reduced ouabain-sensitive potassium entry as a possible mechanism of multidrug-resistance in P388 cells

TERRY J. JENNER, PETER O'NEILL,  
PAUL W. CRUMP,  
E. MARTIN FIELDEN,  
ORAZIO SAPORA and  
LAURA SANTODONATO

- 1705 The repair of DNA damage induced in V79 mammalian cells by the nitroimidazole-aziridine, RSU-1069. Implications for radiosensitization



- LORANNE AGIUS, MATTHEW PEAK and H. STANLEY A. SHERRATT 1711 Differences between human, rat and guinea pig hepatocyte cultures. A comparative study of their rates of  $\beta$ -oxidation and esterification of palmitate and their sensitivity to *R*-etomoxir
- LORANNE AGIUS, EDGAR J. MEREDITH and H. STANLEY A. SHERRATT 1717 Stereospecificity of the inhibition by etomoxir of fatty acid and cholesterol synthesis in isolated rat hepatocytes
- W. H. KO, C. C. WONG, H. W. YEUNG, M. H. YUNG, P. C. SHAW and S. C. TAM 1721 Increasing the plasma half-life of trichosanthin by coupling to dextran
- KARIN WEISSER and JÜRGEN SCHLOOS 1729 The role of enzyme and substrate concentration in the evaluation of serum angiotensin converting enzyme (ACE) inhibition by enalaprilat *in vitro*
- DAVID P. MALLIAROS and PETER GOLDMAN 1739 Interaction of metronidazole with *Escherichia coli* deoxyribonucleic acid
- JAN G. R. ELFERINK and BEN M. DE KOSTER 1745 Stimulation of rabbit polymorphonuclear leukocyte locomotion by D-penicillamine
- ANNELI KOJO, RIITTA HEISKANEN, ANNA-LIISA RYTKÖNEN, PAAVO HONKAKOSKI, RISTO JUVONEN and MATTI LANG 1751 Inducibility of P450<sub>Coh</sub> by pyrazole and its derivatives
- PER S. PRYTZ, BERIT E. BANG, PETTER C. ENDRESEN, CONNY MØLLER and JARLE AARBAKKE 1761 Elevation of cyclic AMP levels in HL-60 cells accumulated in G<sub>1</sub> or G<sub>2</sub> by transmethylation inhibitors
- RYSZARD T. SMOLENSKI, CELIA MONTERO, JOHN A. DULEY and H. ANNE SIMMONDS 1767 Effects of adenosine analogues on ATP concentrations in human erythrocytes. Further evidence for a route independent of adenosine kinase
- MARCELO G. ROMA, RAÚL A. MARINELLI and EMILIO A. RODRÍGUEZ GARAY 1775 Biliary excretion of polyethylene glycol molecular weight 900. Evidence for a bile salt-stimulated vesicular transport mechanism
- YONG S. KIM, ROBERTO D. SAINZ, PETER MOLENAAR and ROGER J. SUMMERS 1783 Characterization of  $\beta_1$ - and  $\beta_2$ -adrenoceptors in rat skeletal muscles
- P. DE MAZANCOURT, C. DARIMONT, J. GIOT and Y. GIUDICELLI 1791 Differential modulation of the adenylate cyclase/cyclic AMP stimulatory pathway by protein kinase C activation in rat adipose tissue and isolated fat cells. Influence of collagenase digestion
- ROBERTO B. BAZOTTE, BETHANY PEREIRA, SANDRA HIGHAM, VARDIA SHOSHAN-BARMATZ and NAOMI KRAUS-FRIEDMANN 1799 Effects of ryanodine on calcium sequestration in the rat liver
- TONG-JUN LIN, GENG-TAO LIU, YAN PAN, YANG LIU and GUANG ZHI XU 1805 Protection by schisanhenol against Adriamycin toxicity in rat heart mitochondria
- JOHN C. MATTHEWS, CHIA-HSUH HSU and KENNETH R. MORRIS 1811 Stimulation of  $^{22}\text{Na}^+$  efflux from rat forebrain membrane vesicles by L-glutamic acid, L-aspartic acid and kainic acid
- CHRISTIAN STEINKÜHLER, JENS Z. PEDERSEN, ULRICH WESER and GIUSEPPE ROTILIO 1821 Oxidative stress induced by a di-Schiff base copper complex is both mediated and modulated by glutathione
- ASTER HABTEYESUS, ANNA NORDENSKJÖLD, CHRISTINA BOHMAN and STAFFAN ERIKSSON 1829 Deoxynucleoside phosphorylating enzymes in monkey and human tissues show great similarities, while mouse deoxycytidine kinase has a different substrate specificity

**Short Communications**

- NICOLE LEGROS, GUY LECLERCQ and RAYMOND MCCAGUE 1837 Effect of estrogenic and antiestrogenic triphenylethylene derivatives on progesterone and estrogen receptors levels of MCF-7 cells
- H. A. A. M. DIRVEN, J. G. P. PETERS, G. GORDON GIBSON, W. H. M. PETERS and F. J. JONGENELEN 1841 Lauric acid hydroxylase activity and cytochrome P450 IV family proteins in human liver microsomes
- LENNART NÄSSBERGER 1844 The antihypertensive compounds hydralazine, dihydralazine and cadralazine and their metabolites inhibit myeloperoxidase activity as measured by chemiluminescence

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- C. O. MESE, C. FISCHER, A. KÜPPER, H. WISSER and M. EICHELBAUM R13 Identification of the "major" polymorphic carbocysteine metabolite as *S*-(carboxymethylthio)-L-cysteine
- SALLY J. HARGUS and M. W. ANDERS R17 Immunochemical detection of covalently modified kidney proteins in *S*-(1,1,2,2-tetrafluoroethyl)-L-cysteine-treated rats

**Commentary**

- ULRICH FÖRSTERMANN, HARALD H. H. W. SCHMIDT, JENNIFER S. POLLOCK, HONG SHENG, JANE A. MITCHELL, TIMOTHY D. WARNER, MASAKI NAKANE and FERID MURAD 1849 Isoforms of nitric oxide synthase. Characterization and purification from different cell types

**Research Papers**

- DAVID I. MARKS and RICHARD M. FOX 1859 DNA damage, poly(ADP-ribosyl)ation and apoptotic cell death as a potential common pathway of cytotoxic drug action
- I. LAFFAFIAN, R. C. BROWN and M. B. HALLETT 1869 The production of an amine-modified derivative of 5-aminosalicylic acid by activated neutrophils. Roles for myeloperoxidase and chloride ions
- HIDEAKI NAGAYA, NOBUHIRO INATOMI, AKIRA NOHARA and HIROSHI SATOH 1875 Effects of the enantiomers of lansoprazole (AG-1749) on ( $H^+ + K^+$ )-ATPase activity in canine gastric microsomes and acid formation in isolated canine parietal cells
- IAIN G. C. ROBERTSON, BRIAN D. PALMER, MEGAN OFFICER, DEREK J. SIEGERS, JAMES W. PAXTON and G. JOHN SHAW 1879 Cytosol mediated metabolism of the experimental anti-tumour agent acridine carboxamide to the 9-acridone derivative
- ANN L. JACKMAN, DAVID R. NEWELL, WILLIAM GIBSON, DUNCAN I. JODRELL, GORDON A. TAYLOR, JOEL A. BISHOP, LESLIE R. HUGHES and A. HILARY CALVERT 1885 The biochemical pharmacology of the thymidylate synthase inhibitor, 2-desamino-2-methyl- $N^{10}$ -propargyl-5,8-dideazafoolic acid (ICI 198583)
- EDUARDO B. OLIVEIRA, MARIA CRISTINA O. SALGADO and ANTHONY J. TURNER 1897 A survey of vasoactive peptide metabolizing enzymes in the rat mesenteric arterial bed perfusate
- ROMUALDA D. KNIHINICKI, RICHARD O. DAY and KENNETH M. WILLIAMS 1905 Chiral inversion of 2-arylpropionic acid non-steroidal anti-inflammatory drugs—II. Racemization and hydrolysis of (*R*)- and (*S*)-ibuprofen-CoA thioesters

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| WERNER ZIMMERLI,<br>SEBASTIANO SANSANO and<br>IRMGARD WIESENBERG-BÖTTCHER                                                   | 1913 | Influence of the anti-inflammatory compound flosulide on granulocyte function                                                                                                                                                        |
| YOICHI KAWASHIMA,<br>TOMOMI MATSUNAGA,<br>NARCISA UY-YU and<br>HIROSHI KOZUKA                                               | 1921 | Induction by perfluorooctanoic acid of microsomal 1-acyl-glycerophosphocholine acyltransferase in rat kidney. Sex-related difference                                                                                                 |
| JOHN ELLIS, JOANNE HUYLER<br>and MARK R. BRANN                                                                              | 1927 | Allosteric regulation of cloned m1-m5 muscarinic receptor subtypes                                                                                                                                                                   |
| ARTHUR J. RADIN, XI-LIN ZHOA,<br>THOMAS H. WOO,<br>O. MICHAEL COLVIN and<br>JOHN HILTON                                     | 1933 | Structure and expression of the cytosolic aldehyde dehydrogenase gene in cyclophosphamide-resistant murine leukemia L1210 cells                                                                                                      |
| KATHERINE A. O'DONNELL and<br>ALLYN C. HOWLETT                                                                              | 1941 | Inhibition of adenylate cyclase by <i>p</i> -bromophenacyl bromide                                                                                                                                                                   |
| KHALID M. ABU-SALAH                                                                                                         | 1947 | Perturbation of the fluidity of the erythrocyte membrane with ionophoric antibiotics and lipophilic anaesthetics                                                                                                                     |
| LEIGH A. RILEY and<br>RICHARD M. DENNEY                                                                                     | 1953 | Problems with the measurement of monoamine oxidase A protein concentration in mitochondrial preparations. Revised molecular activities and implications for estimating ratios of MAO A:MAO B molecules from radiochemical assay data |
| EMILY O. NGO, TER-PING SUN,<br>JANG-YANG CHANG,<br>CHANG-CHUNG WANG,<br>KWAN-HWA CHI, ANN-LII CHENG<br>and LOUISE M. NUTTER | 1961 | Menadione-induced DNA damage in a human tumor cell line                                                                                                                                                                              |
| LEONARD J. SHORE,<br>WILLIAM S. MOGILEVSKY,<br>PHILIP B. W. SMITH,<br>CATHERINE FENSELAU and<br>GERARD B. ODELL             | 1969 | <i>In vitro</i> formation of glutathione conjugates of the dimethylester of bilirubin                                                                                                                                                |
| FREDERIK B. PRUIJN,<br>JEAN-PIERRE SIBEIJN and<br>AALT BAST                                                                 | 1977 | Menadione inhibits the $\alpha_1$ -adrenergic receptor-mediated increase in cytosolic free calcium concentration in hepatocytes by inhibiting inositol 1,4,5-trisphosphate-dependent release of calcium from intracellular stores    |
| AXEL M. GRESSNER                                                                                                            | 1987 | Questioning the reliability of <i>p</i> -nitrophenyl- $\beta$ -D-xyloside as probe to study the metabolic effects of abrogated proteoglycan synthesis in cultured cells                                                              |
| HENRICUS M. J. NIJSSEN,<br>TJAARD PIJNING,<br>DIRK K. F. MEIJER and<br>GENY M. M. GROOTHUIS                                 | 1997 | Mechanistic aspects of uptake and sinusoidal efflux of dibromosulphophthalein in the isolated perfused rat liver                                                                                                                     |
| CONSTANTINE GEORGIADIS and<br>JEFFREY D. LASKIN                                                                             | 2003 | Differential inhibition of epidermal growth factor binding by photoactivated psoralens and the tumor promoter 12- <i>O</i> -tetradecanoyl phorbol-13-acetate in cells overexpressing protein kinase C                                |
| SOUNDARARAJAN REGUNATHAN,<br>MARIAN J. EVINGER, MARY P. MEELEY<br>and DONALD J. REIS                                        | 2011 | Effects of clonidine and other imidazole-receptor binding agents on second messenger systems and calcium influx in bovine adrenal chromaffin cells                                                                                   |
| ANNE H. DANTZIG,<br>PAMELA L. MINOR,<br>JAMES L. GARRIGUS,<br>DAVID S. FUKUDA and<br>JON S. MYNDERSE                        | 2019 | Studies on the mechanism of action of A80915A, a semi-naphthoquinone natural product, as an inhibitor of gastric (H <sup>+</sup> -K <sup>+</sup> )-ATPase                                                                            |
| FRITZ MÄRKI, ELVIRA HÄNNI,<br>ANDREAS FREDENHAGEN and<br>JAN VAN OOSTRUM                                                    | 2027 | Mode of action of the lanthionine-containing peptide antibiotics duramycin, duramycin B and C, and cinnamycin as indirect inhibitors of phospholipase A <sub>2</sub>                                                                 |

**Short Communications**

- J. SÁNCHEZ-YAGÜE,  
J. A. CABEZAS and M. LLANILLO 2037 Effect of cholesterol supplementation on acetylcholinesterase activity from sheep platelet plasma membrane
- SAMANTHA MICHAELSON and  
PETER J. GRAY 2040 A second site of action of soman on acetylcholinesterase
- STEPHEN L. YATES and  
PHILIP ROSENBERG 2043 Enhancement of cross-linking of presynaptic plasma membrane proteins by phospholipase A<sub>2</sub> neurotoxins
- DALE G. DEUTSCH,  
EUGENE R. TOMBLER,  
JAMES E. MARCH, STEPHEN H. C. LO  
and MILTON ADESNIK 2048 Potentiation of the inductive effect of phenobarbital on cytochrome P450 mRNAs by cannabidiol
- SAMY A. AZER and  
NEILL H. STACEY 2053 Effect of cyclosporin A *in vivo* on taurocholate uptake by rat hepatocytes
- M. ALEGRET, R. SÁNCHEZ,  
T. ADZET, M. MERLOS and  
J. C. LAGUNA 2057 *In vitro* effect of clofibric acid derivatives on rat hepatic microsomal electron transport chains
- M. YASEEN, A. E. M. McLEAN  
and S. P. WOLFF 2061 A quick method for detecting metabolic cooperation
- STEVEN R. ROFFLER,  
SHING-MING WANG,  
JI-WANG CHERN,  
MING-YANG YEH and  
EDWARD TUNG 2062 Anti-neoplastic glucuronide prodrug treatment of human tumor cells targeted with a monoclonal antibody-enzyme conjugate
- RAGHAVENDRA BAGEWADIKAR,  
BARBARA BERTRAM,  
NORBERT FRANK and  
MANFRED WIESSLER 2065 Modulation of *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine induced inhibition of cell-free protein synthesis by sulfur compounds

**Additions and Corrections**

- 2069 Inhibition of hypoxic pulmonary vasoconstriction by diphenyleneiodonium. Vol. 42 (1991) R9-R12. *Henry M. Thomas, III, Roger C. Carson, Ethan D. Fried and Richard S. Novitch*

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MORDECHAI LISCOVITCH  
and YAAKOV LAVIE

- 2071 Sphingoid bases as endogenous cationic amphiphilic "drugs"

**Research Papers**

AKBAR Z. SHYADEHI  
and JOHN J. HARDING

- 2077 Investigations of ibuprofen and paracetamol binding to lens proteins to explore their protective role against cataract

IEVA STUPANS and  
LLOYD N. SANSOM

- 2085 The inhibition of drug oxidation by anhydroerythromycin, an acid degradation product of erythromycin

CLAIRE JACKSON, JOHN A. HARTLEY,  
TERENCE C. JENKINS,  
RUSSELL GODFREY,  
RICHARD SAUNDERS  
and DAVID E. THURSTON

- 2091 *N*<sup>2</sup>,*N*<sup>4</sup>,*N*<sup>6</sup>-Tri(hydroxymethyl)-*N*<sup>2</sup>,*N*<sup>4</sup>,*N*<sup>6</sup>-trimethylmelamine (trimelamol) is an efficient DNA cross-linking agent *in vitro*

FAOUZI LAKHDAR-GHAZAL,  
ALAIN VIGROUX, MICHÈLE WILLSON,  
JEAN-FRANÇOIS TOCANNE,  
JACQUES PÉRIÉ and  
JEAN-CHARLES FAYE

- 2099 Interactions between trypanocidal drugs and membrane phospholipids. A surface pressure, surface potential and electrophoretic mobility study

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| MICHAEL MURRAY                                                                                                                                    | 2107 | <i>In vitro</i> and <i>in vivo</i> studies of the effect of vitamin E on microsomal cytochrome P450 in rat liver                                                                        |
| WALTER H. J. WARD,<br>PETER N. COOK,<br>DONALD J. MIRRELES,<br>DAVID R. BRITTAIN,<br>JOHN PRESTON, FRANK CAREY,<br>DAVID P. TUFFIN and RALPH HOWE | 2115 | (2,6-Dimethylphenylsulphonyl)nitromethane: a new structural type of aldose reductase inhibitor which follows biphasic kinetics and uses an allosteric binding site                      |
| MARCO TRESKES, ULBE HOLWERDA,<br>INA KLEIN, HERBERT M. PINEDO<br>and WIM J. F. VAN DER VUUGH                                                      | 2125 | The chemical reactivity of the modulating agent WR2721 (ethiofos) and its main metabolites with the antitumor agents cisplatin and carboplatin                                          |
| D. R. A. MANS, M. V. M. LAFLEUR,<br>E. J. WESTMIJZE,<br>J. M. S. VAN MAANEN,<br>M. A. VAN SCHAIK, J. LANKELMA<br>and J. RETÈL                     | 2131 | Formation of different reaction products with single- and double-stranded DNA by the <i>ortho</i> -quinone and the semi-quinone free radical of etoposide (VP-16-213)                   |
| P. DE CREMOUX, A. ZIMBER,<br>F. CALVO, M. LANOTTE,<br>L. MERCKEN and J. P. ABITA                                                                  | 2141 | Gs $\alpha$ availability to cholera toxin-catalysed ADP-ribosylation is decreased in membranes of retinoic acid-treated leukemic cell lines HL-60 and THP-1. A posttranslational effect |
| ALWIN KRÄMER, HEINZ FRANK,<br>FRANS SETIABUDI, FRANZ OESCH<br>and HANSRUEDI GLATT                                                                 | 2147 | Influence of the level of cytosolic epoxide hydrolase on the induction of sister chromatid exchanges by <i>trans</i> - $\beta$ -ethylstyrene 7,8-oxide in human lymphocytes             |
| LUC R. BÉRUBÉ, SALIM FARAH,<br>ROBERT A. MCCLELLAND and<br>ANDREW M. RAUTH                                                                        | 2153 | Effect of 1-methyl-2-nitrosoimidazole on intracellular thiols and calcium levels in Chinese hamster ovary cells                                                                         |
| ZOHREH ABOLFATHI and<br>THÉRÈSE DI PAOLO                                                                                                          | 2163 | Modulation of dopamine receptor agonist binding sites by cations and estradiol in intact pituitary and 7315a tumors                                                                     |
| LAURIE CARPENTER-DEYO,<br>DANIEL H. MARCHAND,<br>PAUL A. JEAN, ROBERT A. ROTH<br>and DONALD J. REED                                               | 2171 | Involvement of glutathione in 1-naphthylisothiocyanate (ANIT) metabolism and toxicity to isolated hepatocytes                                                                           |
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| YOICHI SATO, LYNNE EDDY<br>and PAUL HOCHSTEIN                                                                                  | 2283 | Comparative cardiotoxicity of doxorubicin and a morpholino anthracycline derivative (KRN8602)                                                                                  |
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| YUKI HATA, YASUFUMU YAMAJI,<br>TAICHI SHIOTANI, JIRO FUJITA,<br>HIROSHI KAMANO, KAZUMA IKEDA,<br>JIRO TAKAHARA and SHOZO IRINO | 2307 | Induction of erythroid differentiation of K562 cells by 4-carbamoylimidazolium 5-olate (SM-108)                                                                                |
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- Additions and Corrections** 2405 Compartmentation of intracellular folates. Failure to interconvert tetrahydrofolate cofactors to dihydrofolate in mitochondria of L1210 leukemia cells treated with trimetrexate. Vol. 42 (1991) 1015-1019. *David F. Trent, Richard L. Seither and I. David Goldman*

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### Commentary

FRANK S. LABELLA

- S1 Molecular basis for binding promiscuity of antagonist drugs

### Research Papers

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- S9 Effect of ethanol on cadmium-induced lipid peroxidation and antioxidant enzymes in rat liver

CAROL K. LINDSAY,  
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- S17 Primary culture of rat hepatocytes in the presence of dimethyl sulphoxide. A system to investigate the regulation of cytochrome P450 1A

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| A. F. LAILEY, L. HILL, I. W. LAWSTON,<br>D. STANTON and D. G. UPSHALL                                                          | S47  | Protection by cysteine esters against chemically induced pulmonary oedema                                                                                                                                                                      |
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| B. PODDEVIN, S. ORLOWSKI,<br>J. BELEHRADEK JR and L. M. MIR                                                                    | S67  | Very high cytotoxicity of bleomycin introduced into the cytosol of cells in culture                                                                                                                                                            |
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| JEAN-FRANÇOIS LAGORCE,<br>JEAN-CLAUDE THOMES,<br>GILBERT CATANZANO,<br>JACQUES BUXERAUD, MICHÈLE RABY<br>and CLAUDE RABY       | S89  | Formation of molecular iodine during oxidation of iodide by the peroxidase/H <sub>2</sub> O <sub>2</sub> system. Implications for anti-thyroid therapy                                                                                         |
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| WENDY R. GALPERN,<br>LAWRENCE G. MILLER,<br>DAVID J. GREENBLATT,<br>GEORGE K. SZABO, THOMAS R. BROWNE<br>and RICHARD I. SHADER | S99  | Chronic benzodiazepine administration. IX. Attenuation of alprazolam discontinuation effects by carbamazepine                                                                                                                                  |
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