

U.S. Postal Service <b>STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION</b> <small>Required by 39 U.S.C. 3685</small>		
1A. TITLE OF PUBLICATION <b>MOLECULAR PHARMACOLOGY</b>		1B. PUBLICATION NO. 0 0 2 6 8 9 5 X
3. FREQUENCY OF ISSUE <b>Monthly</b>		2. DATE OF FILING <b>10/1/85</b>  3A. NO. OF ISSUES PUBLISHED ANNUALLY <b>12</b> 3B. ANNUAL SUBSCRIPTION PRICE <b>\$75.00</b>
4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP+4 Code) (Not printers) <b>428 East Preston Street, Baltimore, MD 21202</b>		
5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER (Not printers) <b>428 East Preston Street, Baltimore, MD 21202</b>		
6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (This item MUST NOT be blank)		
PUBLISHER (Name and Complete Mailing Address) <b>Williams &amp; Wilkins, 428 E. Preston Street, Baltimore, MD 21202</b>		
EDITOR (Name and Complete Mailing Address) <b>Dr. Joel Hardman, Department of Pharmacology, Vanderbilt University, Medical Center, Nashville, TN 37232</b>		
MANAGING EDITOR (Name and Complete Mailing Address)		
7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) (Item must be completed.)		
FULL NAME <b>American Society for Pharmacology and Experimental Therapeutics</b>		COMPLETE MAILING ADDRESS <b>9650 Rockville Pike Bethesda, MD 20814</b>
8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If there are none, so state)		
FULL NAME <b>NONE</b>		COMPLETE MAILING ADDRESS
9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (Section 423.12 DMM only) The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes. (Check one)		
<input checked="" type="checkbox"/> (1) HAS NOT CHANGED DURING PRECEDING 12 MONTHS <input type="checkbox"/> (2) HAS CHANGED DURING PRECEDING 12 MONTHS (If changed, publisher must submit explanation of change with this statement.)		
10. EXTENT AND NATURE OF CIRCULATION (See instructions on reverse side)		AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS
A. TOTAL NO. COPIES (Net Press Run)		2179
B. PAID AND UNPAID SUBSCRIPTIONS *SEE LINE 11 1. Sales through dealers and carriers, street vendors and counter sales		57
2. Mail Subscriptions (Paid and/or requested)		1412
C. TOTAL PAID AND/OR REQUESTED CIRCULATION (Sum of 10B1 and 10B2)		1469
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES		90
E. TOTAL DISTRIBUTION (Sum of C and D)		1559
F. COPIES NOT DISTRIBUTED 1. Office use, left over, unaccounted, spoiled after printing		620
2. Return from News Agents		NONE
G. TOTAL (Sum of F, 1 and 2 - should equal net press run shown in A)		2179
		2273
11. I certify that the statements made by me above are correct and complete		SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER <i>[Signature]</i> *NOTE: Paid subscribers mailed via Canada Post

## AUTHOR INDEX FOR VOLUME 28

## A

- Abrass, Itamar B.**, See *Scarpace, Baresi, and Sanford*, 495  
**Akaike, A.**, See *Shaw, Aracava, Daly, Rickett, and Albuquerque*, 527  
**Albano, E., Rundgren, M., Harvison, P. J., Nelson, S. D., and Moldéus, P.** Mechanisms of *N*-Acetyl-*p*-benzoquinone Imine Cytotoxicity, 306  
**Albuquerque, E. X.**  
 See *Shaw, Aracava, Akaike, Daly, and Rickett*, 527  
 See *Varanda, Aracava, Sherby, VanMeter, and Eldefrawi*, 128  
**Aracava, Y.**  
 See *Shaw, Akaike, Daly, Rickett, and Albuquerque*, 527  
 See *Varanda, Sherby, VanMeter, Eldefrawi, and Albuquerque*, 128  
**Aronstam, Robert S.**, See *McKay and Schneider*, 10  
**Autry, W. Lee**, See *Norman and Barbaz*, 521  
**Ayusawa, Dai**, See *Balzarini, De Clercq, Verbruggen, and Seno*, 581

## B

- Bailey, Britney S.**, See *Wrighton, Schuetz, Watkins, Maurel, Barwick, Hartle, Young, and Guzelian*, 312  
**Balfour, Celia**, See *Halpert, Miller, Morgan, Dunbar, and Kaminsky*, 290  
**Balzarini, Jan, De Clercq, Erik, Verbruggen, Alfons, Ayusawa, Dai, and Seno, Takeshi.** Highly Selective Cytostatic Activity of (*E*)-5-(2-Bromovinyl)-2'-deoxyuridine Derivatives for Murine Mammary Carcinoma (FM3A) Cells Transformed with the Herpes Simplex Virus Type 1 Thymidine Kinase Gene, 581  
**Barbaz, Beverly S.**, See *Norman and Autry*, 521  
**Baresi, Lee A.**, See *Scarpace, Sanford, and Abrass*, 495  
**Barovsky, Kenneth, and Brooker, Gary.** Forskolin Potentiation of Cholera Toxin-Stimulated Cyclic AMP Accumulation in Intact C6-2B Cells: Evidence for Enhanced G<sub>s</sub>-C Coupling, 502  
**Barwick, Joyce**, See *Wrighton, Schuetz, Watkins, Maurel, Bailey, Hartle, Young, and Guzelian*, 312  
**Battaglia, George**, See *Norman and Creese*, 487  
**Beaven, Michael A.**, See *WoldeMussie*, 191  
**Belinsky, Steven A., Reinke, Lester A., Scholz, Roland, Kauffman, Frederick C., and Thurman, Ronald G.** Rates of Pentose Cycle Flux in Perfused Rat Liver: Evaluation of the Role of Reducing Equivalents from the Pentose Cycle for Mixed-Function Oxidation, 371  
**Bend, John R.**, See *Serabjit-Singh and Philpot*, 72  
**Benschop, H. P.**, See *Brimfield, Hunter, Lenz, Van Dijk, and de Jong*, 32  
**Berger, Franklin G.**, See *Berger, Jenh, and Johnson*, 461  
**Berger, Sondra H., Jenh, Chung-Her, Johnson, Lee F. and Berger, Franklin G.** Thymidylate Synthase Overproduction and Gene Amplification in Fluorodeoxyuridine-Resistant Human Cells, 461  
**Bergman, Jan**, See *Gillner, Cambillau, Fernström, and Gustafsson*, 357  
**Blackmore, Peter F.**, See *Lynch, Charest, and Exton*, 93  
**Blumer, Jeffrey L.**, See *Pellack-Walker, Walker, and Evans*, 560  
**Bolger, Michael B.**, See *Ransom, Lee, and Shih*, 185  
**Borchardt, Ronald T.**, See *Keller, Clark, and Pegg*, 364  
**Borgeat, Pierre**, See *Salari and Braquet*, 546  
**Braquet, Pierre**, See *Salari and Borgeat*, 546  
**Brasier, Robert S.** See *Neubig and Gantzog*, 475  
**Bräutigam, Matthias, Kittner, Barbara, and Laschinski, Gabriele.** Effects of Apomorphine Enantiomers and of Lisuride on 3,4-Dihydroxyphenylalanine Production in Striatal Synaptosomes, 515  
**Brimfield, A. A., Hunter, K. W., Jr., Lenz, D. E., Benschop, H.**

- P., Van Dijk, C., and de Jong, L. P. A.** Structural and Stereochemical Specificity of Mouse Monoclonal Antibodies to the Organophosphorus Cholinesterase Inhibitor Soman, 32  
**Brimijoin, S., Mintz, K. P., and Prendergast, F. G.** An Inhibitory Monoclonal Antibody to Rabbit Brain Acetylcholinesterase: Studies on Interaction with the Enzyme, 539  
**Brooker, Gary**, See *Barovsky*, 507  
**Bruni, Paola, Burns, Drusilla L., Hewlett, Erik L., and Moss, Joel.** Effects of Pertussis Toxin on cAMP and cGMP Response to Carbamylcholine in N1E-115 Neuroblastoma Cells, 229  
**Burch, Mark**, See *Culver, Potenza, Wasserman, Fenical, and Taylor*, 436  
**Burgisser, Ernst**, See *Pletscher, Erne, and Ferracin*, 508  
**Burns, Drusilla L.**, See *Bruni, Hewlett, and Moss*, 229  
**Butcher, Reginald W.**, See *Proll and Clark*, 331  
**Bylund, David B.**, See *Turner and Ray-Prenger*, 422

## C

- Cambillau, Christian**, See *Gillner, Bergman, Fernström, and Gustafsson*, 357  
**Caron, Marc G.**, See *Strasser, Cerione, Codina, and Lefkowitz*, 237  
**Casida, John E., Palmer, Christopher J., and Cole, Loretta M.** Bicycloorthocarbonylate Convulsants: Potent GABA<sub>A</sub> Receptor Antagonists, 246  
**Cerione, Richard A.**, See *Strasser, Codina, Caron, and Lefkowitz*, 237  
**Charest, Robert**, See *Lynch, Blackmore, and Exton*, 93  
**Chou, Ming, W.**, See *Fu and von Tungeln*, 62  
**Clark, Richard B.**, See *Proll and Butcher*, 331  
**Clark, Richard S.**, See *Keller, Pegg, and Borchardt*, 364  
**Codding, Penelope W., Muir, Alastair, K. S.** Molecular Structure of Ro15-1788 and a Model for the Binding of Benzodiazepine Receptor Ligands: Structural Identification of Common Features in Antagonists, 178  
**Codina, Juan**, See *Strasser, Cerione, Caron, and Lefkowitz*, 237  
**Cohen, Marvin B.**, See *Linevsky, Hartman, Knodel, and Glazer*, 45  
**Cohen, Sasson**, See *Lotan, Dascal, Oron, and Lass*, 170  
**Cole, Loretta M.**, See *Casida and Palmer*, 246  
**Costa, Erminio**, See *Mocchetti and Schwartz*, 86  
**Costa, T., Wüster, M., Gramsch, C., and Herz, A.** Multiple States of Opioid Receptors May Modulate Adenylate Cyclase in Intact Neuroblastoma × Glioma Hybrid Cells, 146  
**Creese, Ian**, See *Norman and Battaglia*, 487  
**Culver, Paul, Burch, Mark, Potenza, Carol, Wasserman, Linda, Fenical, William, and Taylor, Palmer.** Structure-Activity Relationships for the Irreversible Blockade of Nicotinic Receptor Agonist Sites by Lophotoxin and Congeneric Diterpene Lactones, 436  
**Cysyk, Richard L.**, See *Moyer, Karle, Malinowski, Marquez, Salam, and Malspeis*, 454

## D

- Daly, J. W.**, See *Shaw, Aracava, Akaike, Rickett, and Albuquerque*, 527  
**Dascal, Nathan**, See *Lotan, Oron, Cohen, and Lass*, 170  
**Davies, Helen W.**, See *Satoh, Gillette, Schulick, and Pohl*, 468  
**De Clercq, Erik**, See *Balzarini, Verbruggen, Ayusawa, and Seno*, 581  
**de Jong, L. P. A.**, See *Brimfield, Hunter, Lenz, Benschop, and Van Dijk*, 32  
**Drendel, William B.**, See *Kende, Ebetino, Sundaralingam, Glover, and Poland*, 445  
**Dunbar, Deborah**, See *Halpert, Balfour, Miller, Morgan, and Kaminsky*, 290

## E

- Ebetino, Frank H.**, See *Kende, Drendel, Sundaralingam, Glover, and Poland*, 445
- Ehlert, Frederick J., Jenden, Donald J.** The Binding of a 2-Chloroethylamine Derivative of Oxotremorine (BM 123) to Muscarinic Receptors in the Rat Cerebral Cortex, 107
- Ehlert, Frederick J.** The Relationship between Muscarinic Receptor Occupancy and Adenylate Cyclase Inhibition in the Rabbit Myocardium, 410
- Eldefrawi, M. E.**, See *Varanda, Aracava, Sherby, VanMeter, and Albuquerque*, 128
- Erne, Paul**, See *Pletscher, Burgisser, and Ferracin*, 508
- Evans, Helen H.**, See *Pellack-Walker, Walker, and Blumer*, 560
- Exton, John H.**, See *Lynch, Blackmore, and Charest*, 93

## F

- Fenical, William**, See *Culver, Burch, Potenza, Wasserman, and Taylor*, 436
- Fernström, Birgitta**, See *Gillner, Bergman, Cambillau, and Gustafsson*, 357
- Ferracin, Fabrizia**, See *Pletscher, Erne, and Burgisser*, 508
- Finney, D. A.**, See *Sklar, Sayre, and McNeil*, 323
- Fu, Peter P., von Tungeln, L. S., and Chou, Ming W.** Stereoselective Metabolism of 7-Chlorobenz(a)anthracene by Rat Liver Microsomes: Absolute Configurations and Optical Purities of *trans*-Dihydrodiol Metabolites, 62

## G

- Gantz, Robin D.**, See *Neubig and Brasier*, 475
- Garbarg, Monique**, See *Yeremian and Schwartz*, 155
- Garzón, Javier, Schulz, Rüdiger, and Herz, Albert.** Evidence for the  $\epsilon$ -Type of Opioid Receptor in the Rat Vas Deferens, 1
- George, Susan R.**, See *Seeman, Watanabe, Grigoriadis, Tedesco, Svensson, Nilsson, and Neumeyer*, 391
- Gessa, Gian Luigi**, See *Onali and Olinas*, 138
- Geyer, Pamela, K.**, See *Jenh, Baskin, and Johnson*, 80
- Giedroc, David P., and Puett, David.** Binding of a Synthetic  $\beta$ -Endorphin Peptide to Calmodulin, 588
- Gillette, James R.**, See *Satoh, Davies, Schulick, and Pohl*, 468
- Gillner, Mikael, Bergman, Jan, Cambillau, Christian, Fernström, Birgitta, and Gustafsson, Jan-Åke.** Interactions of Indoles with Specific Binding Sites for 2,3,7,8-Tetrachlorodibenzo-p-dioxin in Rat Liver, 357
- Glazer, Robert I.**, See *Linevsky, Cohen, Hartman, and Knode*, 45
- Glover, Edward**, See *Kende, Ebetino, Drendel, Sundaralingam, and Poland*, 445
- Goldstein, Menek**, See *Lee, Seeley, Müller, Helmer-Matyjek, Sabban, and Greene*, 220
- Gowans, Bonnie J.**, See *Hunting and Henderson*, 200
- Gramsch, C.**, See *Costa, Wüster, and Herz*, 146
- Grant, Augustus O.**, See *Starmer*, 348
- Greene, Lloyd A.**, See *Lee, Seeley, Müller, Helmer-Matyjek, Sabban, and Goldstein*, 220
- Grigoriadis, Dimitri**, See *Seeman, Watanabe, Tedesco, George, Svensson, Nilsson, and Neumeyer*, 391
- Guengerich, F. Peter**, See *Shimada*, 215
- Gurwitz, David, Kloog, Yoel, and Sokolovsky, Mordechai.** High Affinity Binding of [ $^3$ H]Acetylcholine to Muscarinic Receptors: Regional Distribution and Modulation by Guanine Nucleotides, 297
- Gustafsson, Jan-Åke**, See *Gillner, Bergman, Cambillau, and Fernström*, 357
- Guzelian, Philip**, See *Wrighton, Schuetz, Watkins, Maurel, Barwick, Bailey, Hartle, and Young*, 312

## H

- Hale, Susan E.**, See *Williams, Muerhoff, and Masters*, 381
- Halpert, James, Balfour, Celia, Miller, Natalie E., Morgan,**

- Edward T., Dunbar, Deborah, and Kaminsky, Laurence S.** Isozyme Selectivity of the Inhibition of Rat Liver Cytochromes P-450 by Chloramphenicol *in Vivo*, 290
- Halushka, Perry V.**, See *Mais, Kochel, and Saussy*, 163
- Handwerker, Stuart**, See *Zeitler*, 549
- Hartle, Heather T.**, See *Wrighton, Schuetz, Watkins, Maurel, Barwick, Bailey, Young, and Guzelian*, 312
- Hartman, Kathleen D.**, See *Linevsky, Cohen, Knode, and Glazer*, 45
- Harvison, P. J.**, See *Albano, Rundgren, Nelson, and Moldéus*, 306
- Hawke, Roy L., and Welch, Richard M.** Major Differences in the Specificity and Regulation of Mouse Renal Cytochrome P-450-Dependent Monooxygenases: A Comparison of Xenobiotic and Endogenous Substrates, 283
- Hayashi, Eiichi**, See *Yamada, Isogai, Kagawa, Takayanagi, Tsuji, and Kosuge*, 120
- Helmer-Matyjek, Elizabeth**, See *Lee, Seeley, Müller, Sabban, Goldstein, and Greene*, 220
- Henderson, J. Frank**, See *Hunting and Gowans*, 200
- Henley, Jeremy M.** Epinephrine-Stimulated Maintained Rubidium Efflux from Guinea Pig Hepatocytes May Involve  $\alpha_1$ - and  $\alpha_2$ -Adrenoceptors, 431
- Henneberry, Richard C.**, See *Lysko*, 338
- Herz, A.**, See *Costa, Wüster, and Gramsch*, 146
- Herz, Albert**, See *Garzón and Schulz*, 1
- Hewlett, Erik L.**, See *Bruni, Burns, and Moss*, 229
- Hosey, M. Marlene**, See *McMahon*, 400
- Hunter, K. W., Jr.**, See *Brimfield, Lenz, Benschop, Van Dijk, and de Jong*, 32
- Hunting, Darel J., Gowans, Bonnie J., and Henderson, J. Frank.** Specificity of Inhibitors of Poly(ADP-Ribose) Synthesis: Effects on Nucleotide Metabolism in Cultured Cells, 200

## I

- Isogai, Mitsutaka**, See *Yamada, Kagawa, Takayanagi, Hayashi, Tsuji, and Kosuge*, 120

## J

- Jenden Donald J.**, See *Ehlert*, 107
- Jenh, Chung-Her**
- Geyer, Pamela, K., Baskin, Fred, and Johnson, Lee F.** Thymidylate Synthase Gene Amplification in Fluorodeoxyuridine-Resistant Mouse Cell Lines, 80
- See *Berger, Johnson, and Berger*, 461
- Johnson, Lee F.**
- See *Berger, Jenh, and Berger*, 461
- See *Jenh, Geyer, and Baskin*, 80
- Jones, Dean P.**, See *Lash*, 278
- Jovanovic, Slobodan, V., Neta, P., and Simic, Michael G.** One-Electron Redox Reactions of Pyrazolin-5-ones: A Pulse Radiolysis Study of Antipyrine and Analogues, 377

## K

- Kagawa, Yoshiyuki**, See *Yamada, Isogai, Takayanagi, Hayashi, Tsuji, and Kosuge*, 120
- Kaminsky, Laurence S.**, See *Halpert, Balfour, Miller, Morgan, and Dunbar*, 290
- Karle, Jean M.**, See *Moyer, Malinowski, Marquez, Salam, Malspeis, and Csyk*, 454
- Kauffman, Frederick C.**, See *Belinsky, Reinke, Scholz, and Thurman*, 371
- Kedderis, Gregory L., and Rickert, Douglas, E.** Characterization of the Oxidation of Amine Metabolites of Nitrotoluenes by Rat Hepatic Microsomes: N- and C-Hydroxylation, 207
- Keller, Bradley T., Clark, Richard S., Pegg, Anthony E., and Borchardt, Ronald T.** Purification and Characterization of Some Metabolic Effects of S-Neplanocylmethionine, 364
- Kende, Andrew S., Ebetino, Frank H., Drendel, William B., Sundaralingam, M., Glover, Edward, and Poland, Alan.**

Structure-Activity Relationship of Bispyridyloxybenzene for Induction of Mouse Hepatic Aminopyrine *N*-Demethylase Activity: Chemical, Biological, and X-Ray Crystallographic Studies, 445

Kittner, Barbara, See Bräutigam and Laschinski, 515

Kloog, Yoel, See Gurwitz and Sokolovsky, 297

Knodel, Marion C., See Linevsky, Cohen, Hartman, and Glazer, 45

Kochel, Pamela J., See Mais, Saussy, and Halushka, 163

Kosuge, Takuo, See Yamada, Isogai, Kagawa, Takayanagi, Hayashi, and Tsuji, 120

## L

Laschinski, Gabriele, See Bräutigam and Kittner, 515

Lash, Lawrence H., and Jones, Dean P. Uptake of the Glutathione Conjugate *S*-(1,2-Dichlorovinyl)glutathione by Renal Basal-Lateral Membrane Vesicles and Isolated Kidney Cells, 278

Lass, Yoram, See Lotan, Dascal, Oron, and Cohen, 170

Laufen, H., See Yeates and Leitold, 555

Lawson, John A., See Loew, Nienow, Toll, and Uyeno, 17

Lee, Jeng Dong, See Ransom, Bolger, and Shih, 185

Lee, Kwan Y., Seeley, P. John, Müller, Thomas H., Helmer-Matyjek, Elizabeth, Sabban, Esther, Goldstein, Menek, and Greene, Lloyd A. Regulation of Tyrosine Hydroxylase Phosphorylation in PC12 Pheochromocytoma Cells by Elevated  $K^+$  and Nerve Growth Factor: Evidence for Different Mechanisms of Action, 220

Lefkowitz, Robert J., See Strasser, Cerione, Codina, and Caron, 237

Leitold, M., See Yeates and Laufen, 555

Lenz, D. E., See Brimfield, Hunter, Benschop, Van Dijk, and de Jong, 32

Linevsky, Joanne, Cohen, Marvin B., Hartman, Kathleen D., Knodel, Marion C., and Glazer, Robert I. Effect of Neplanocin A on Differentiation, Nucleic Acid Methylation, and *c-myc* mRNA Expression in Human Promyelocytic Leukemia Cells, 45

Loew, Gilda H., Nienow, J., Lawson, John A., Toll, Lawrence, and Uyeno, Edward T. Theoretical Structure-Activity Studies of  $\beta$ -Carboline Analogs: Requirements for Benzodiazepine Receptor Affinity and Antagonist Activity, 17

Lotan, Ilana, Dascal, Nathan, Oron, Yoram, Cohen, Sasson, and Lass, Yoram. Adenosine-Induced  $K^+$  Current in *Xenopus* Oocyte and the Role of Adenosine 3',5'-Monophosphate, 170

Luskey, Kenneth L., See Noguchi, and Pavone, 40

Lynch, Christopher J., Blackmore, Peter F., Charest, Robert, and Exton, John H. The Relationships between Receptor Binding Capacity for Norepinephrine, Angiotensin II, and Vasopressin and Release of Inositol Trisphosphate,  $Ca^{2+}$  Mobilization and Phosphorylase Activation in Rat Liver, 93

Lysko, Paul G., and Henneberry, Richard C. Differentiation between Amine Transport and  $\beta$ -Adrenergic Receptor-mediated Binding in Cultured Mammalian Cells, 338

## M

Macdonald Robert L., See Werz, 269

Mais, Dale E., Kochel, Pamela J., Saussy, David L., Jr., and Halushka, Perry V. Binding of an  $^{125}I$ -Labeled Thromboxane  $A_2$ /Prostaglandin  $H_2$  Receptor Antagonist to Washed Canine Platelets, 163

Malick, N. C., See Snyder, 574

Malinowski, Nancy, See Moyer, Karle, Marquez, Salam, Malspeis, and Cystyk, 454

Malspeis, Louis, See Moyer, Karle, Malinowski, Marquez, Salam, and Cystyk, 454

Marquez, Victor E., See Moyer, Karle, Malinowski, Salam, Malspeis, and Cystyk, 454

Masters, Bettie Sue Siler, See Williams, Hale, and Muerhoff, 381

Maurel, Patrick, See Wrighton, Schuetz, Watkins, Barwick, Bailey, Hartle, Young, and Guzelian, 312

McKay, Dennis B., Aronstam, Robert S., and Schneider, Allan, S. Interactions of Microtubule-Active Agents with Nicotinic Ace-

tylcholine Receptors: Relationship to Their Inhibition of Catecholamine Secretion by Adrenal Chromaffin Cells, 10

McMahon Kathryn K., and Hosey, M. Marlene. Agonist Interactions with Cardiac Muscarinic Receptors: Effects of  $Mg^{2+}$ , Guanine Nucleotides, and Monovalent Cations, 400

McMillin-Wood J. B., See Tsokos-Kuhn, Todd, and Mitchell, 56

McNeil, V. M., See Sklar, Sayre, and Finney, 323

Miller, Natalie E., See Halpert, Balfour, Morgan, Dunbar, and Kaminsky, 290

Mintz, K. P., See Brimijoin and Prendergast, 539

Mitchell, J. R., See Tsokos-Kuhn, Todd, and McMillin-Wood, 56

Mocchetti, Italo, Schwartz, Joan P., and Costa, Erminio. Use of mRNA Hybridization and Radioimmunoassay to Study Mechanisms of Drug-Induced Accumulation of Enkephalins in Rat Brain Structures, 86

Moldéus, P., See Albano, Rundgren, Harvison, and Nelson, 306

Morgan, Edward T., See Halpert, Balfour, Miller, Dunbar, and Kaminsky, 290

Moss, Joel, See Bruni, Burns, and Hewlett, 229

Moyer, James D., Karle, Jean M., Malinowski, Nancy, Marquez, Victor E., Salam, Mohammed A., Malspeis, Louis, and Cysyk, Richard L. Inhibition of Uridine Kinase and the Salvage of Uridine by Modified Pyrimidine Nucleosides, 454

Muerhoff, A. Scott, See Williams, Hale, and Masters, 381

Muir, Alastair, K. S., See Codding, 178

Müller, Thomas H., See Lee, Seeley, Helmer-Matyjek, Sabban, Goldstein, and Greene, 220

## N

Nathanson, James A. Phenyliminoimidazolidines: Characterization of a Class of Potent Agonists of Octopamine-Sensitive Adenylate Cyclase and Their Use in Understanding the Pharmacology of Octopamine Receptors, 254

Nelson, S. D., See Albano, Rundgren, Harvison, and Moldéus, 306

Neta, P., See Jovanovic and Simic, 377

Neubig, Richard R., Gantzos, Robin D., and Brasier, Robert S. Agonist and Antagonist Binding to  $\alpha_2$ -Adrenergic Receptors in Purified Membranes from Human Platelets: Implications of Receptor-Inhibitory Nucleotide-Binding Protein Stoichiometry, 475

Neumeyer, John L., See Seeman, Watanabe, Grigoriadis, Tedesco, George, Svensson, and Nilsson, 391

Nienow, John, See Loew, Lawson, Toll, and Uyeno, 17

Nilsson, J. Lars G., See Seeman, Watanabe, Grigoriadis, Tedesco, George, Svensson, and Neumeyer, 391

Noguchi, Constance Tom, Luskey, Kenneth L., Pavone, Vincenzo. Dipeptides as Inhibitors of the Gelation of Sick Hemoglobin, 40

Norman, Andrew B., Battaglia, George, and Creese, Ian. [ $^3H$ ] WB4101 Labels the 5-Hydroxytryptamine-1A Serotonin Receptor Subtype in Rat Brain: Guanine Nucleotide and Divalent Cation Sensitivity, 487

Norman, Jon A., Autry, W. Lee, and Barbaz, Beverly S. Angiotensin-Converting Enzyme Inhibitors Potentiate the Analgesic Activity of [Met]-Enkephalin-Arg $^6$ -Phe $^7$  by Inhibiting Its Degradation in Mouse Brain, 521

## O

Olianas, Maria C., See Onali and Gessa, 138

Onali, Pierluigi, Olianas, Maria, C., and Gessa, Gian Luigi. Characterization of Dopamine Receptors Mediating Inhibition of Adenylate Cyclase Activity in Rat Striatum, 138

Oron, Yoram, See Lotan, Dascal, Cohen, and Lass, 170

## P

Palmer, Christopher J., See Casida and Cole, 246

Pavone, Vincenzo, See Noguchi, and Luskey, 40

Pegg, Anthony E., See Keller, Clark, and Borchardt, 364

Pellack-Walker, Peggy, Walker, J. Ken, Evans, Helen H., and

- Blumer, Jeffrey L.** Relationship between the Oxidation Potential of Benzene Metabolites and Their Inhibitory Effect on DNA Synthesis in L5178YS Cells, 560
- Philpot, Richard M.**, See *Serabjit-Singh and Bend*, 72
- Pletscher, Alfred, Erne, Paul, Burgisser, Ernst, and Ferracin, Fabrizia.** Activation of Human Blood Platelets by Arginine-Vasopressin: Role of Bivalent Cations, 508
- Pohl, Lance R.**, See *Satoh, Gillette, Davies, and Schulick*, 468
- Poland, Alan**, See *Kende, Ebetino, Drendel, Sundaralingam, and Glover*, 445
- Potenza, Carol**, See *Culver, Burch, Wasserman, Fenical, and Taylor*, 436
- Prendergast, F. G.**, See *Brimijoin and Mintz*, 539
- Proll, Melissa A., Clark, Richard B., and Butcher, Reginald W.** Phosphatidate and Monooleylphosphatidate Inhibition of Fibroblast Adenylate Cyclase Is Mediated by the Inhibitory Coupling Protein,  $N_i$ , 331
- Puett, David**, See *Giedroc*, 588

## R

- Ransom, Richard W., Lee, Jeng Dong, Bolger, Michael B., and Shih Jean C.** Photoinactivation of Serotonin Uptake by an Arylazido Derivative of 5-Hydroxytryptamine, 185
- Ray-Prenger, Carla**, See *Turner and Bylund*, 422
- Reinke, Lester A.**, See *Belinsky, Scholz, Kauffman, and Thurman*, 371
- Rickert, Douglas E.**, See *Kedderis*, 207
- Rickett, D. L.**, See *Shaw, Aracava, Akaike, Daly, and Albuquerque*, 527
- Rundgren, M.**, See *Albano, Harvison, Nelson, and Moldéus*, 306

## S

- Sabban, Esther**, See *Lee, Seeley, Müller, Helmer-Matyjek, Goldstein, and Greene*, 220
- Salam, Mohammed A.**, See *Moyer, Karle, Malinowski, Marquez, Malspeis, and Csyk*, 454
- Salari, Hassan, Braquet, Pierre, and Borgeat, Pierre.** Stimulation of Lipoygenase Product Synthesis in Human Leukocytes and Platelets by Melittin, 546
- Sanford, David A.**, See *Scarpase, Baresi, and Abrass*, 495
- Sartorelli, Alan C.**, See *Sokoloski*, 567
- Satoh, Hiroko, Gillette, James R., Davies, Helen W., Schulick, Richard D., and Pohl, Lance R.** Immunochemical Evidence of Trifluoroacetylated Cytochrome P-450 in the Liver of Halothane-Treated Rats, 468
- Saussy, David L., Jr.**, See *Mais, Kochel, and Halushka*, 163
- Sayre, J.**, See *Sklar, McNeil, and Finney*, 323
- Scarpase, Phillip J., Baresi, Lee A., Sanford, David A., and Abrass, Itamar B.** Desensitization and Resensitization of  $\beta$ -Adrenergic Receptors in a Smooth Muscle Cell Line, 495
- Schneider, Allan S.**, See *McKay and Aronstam*, 10
- Scholz, Roland**, See *Belinsky, Reinke, Kauffman, and Thurman*, 371
- Schuetz, Erin G.**, See *Wrighton, Watkins, Maurel, Barwick, Bailey, Hartle, Young, and Guzelian*, 312
- Schulick, Richard D.**, See *Satoh, Gillette, Davies, and Pohl*, 468
- Schulz, Rüdiger**, See *Garzón and Herz*, 1
- Schwartz, Jean-Charles**, See *Yeremian and Garbarg*, 155
- Schwartz, Joan P.**, See *Mocchetti and Costa*, 86
- Seeley, P. John**, See *Lee, Müller, Helmer-Matyjek, Sabban, Goldstein, and Greene*, 220
- Seeman, Philip, Watanabe, Masayuki, Grigoriadis, Dimitri, Tedesco, Joseph L., George, Susan R., Svensson, U., Nilsson, J. Lars G., and Neumeyer, John L.** Dopamine  $D_2$  Receptor Binding Sites for Agonists: A Tetrahedral Model, 391
- Seno, Takeshi**, See *Balzarini, De Clercq, Verbruggen, and Ayusawa*, 581
- Serabjit-Singh, Cosette J., Bend, John R., and Philpot, Richard M.** Cytochrome P-450 Monooxygenase System: Localization in Smooth Muscle of Rabbit Aorta, 72

- Shaw, K.-P., Aracava, Y., Akaike, A., Daly, J. W., Rickett, D. L., and Albuquerque, E. X.** The Reversible Cholinesterase Inhibitor Physostigmine Has Channel-Blocking and Agonist Effects on the Acetylcholine Receptor-Ion Channel Complex, 527
- Sherby, S. M.**, See *Varanda, Aracava, VanMeter, Eldefrawi, and Albuquerque*, 128
- Shih, Jean C.**, See *Ransom, Lee, and Bolger*
- Shimada, Tsutomu, and Guengerich, F. Peter.** Participation of a Rat Liver Cytochrome P-450 Induced by Pregnenolone  $16\alpha$ -Carbonitrile and Other Compounds in the 4-Hydroxylation of Mephenytoin, 215
- Simic, Michael G.**, See *Jovanovic and Neta*, 377
- Sklar, L. A., Sayre, J., McNeil, V. M., and Finney, D. A.** Competitive Binding Kinetics in Ligand-Receptor-Competitor Systems: Rate Parameters for Unlabeled Ligands for the Formyl Peptide Receptor, 323
- Snyder, R. D., and Malick, N. C.** Effects of Hydroxyurea and Thymidine Derivatives on the Uptake and Metabolism of Deoxycytidine and Arabinofuranosylcytosine in Log Phase and Contact-Inhibited Human Diploid Fibroblasts, 574
- Sokoloski, John A., and Sartorelli, Alan C.** Effects of the Inhibitors of IMP Dehydrogenase, Tiazofurin and Mycophenolic Acid, on Glycoprotein Metabolism, 567
- Sokolovsky, Mordechai**, See *Gurwitz and Kloog*, 297
- Starmer, C. Frank, and Grant, Augustus O.** Phasic Ion Channel Blockade: A Kinetic Model and Parameter Estimation Procedure, 348
- Strasser, Ruth H., Cerione, Richard A., Codina, Juan, Caron, Marc G., and Lefkowitz, Robert J.** Homologous Desensitization of the  $\beta$ -Adrenergic Receptor: Functional Integrity of the Desensitized Receptor from Mammalian Lung, 237
- Sundaralingam, M.**, See *Kende, Ebetino, Drendel, Glover, and Poland*, 445
- Svensson, U.**, See *Seeman, Watanabe, Grigoriadis, Tedesco, George, Nilsson, and Neumeyer*, 391

## T

- Takayanagi, Noriyasu**, See *Yamada, Isogai, Kagawa, Hayashi, Tsuji, and Kosuge*, 120
- Taylor, Palmer**, See *Culver, Burch, Potenza, Wasserman, and Fenical*, 436
- Tedesco, Joseph L.**, See *Seeman, Watanabe, Grigoriadis, George, Svensson, Nilsson, and Neumeyer*, 391
- Thurman, Ronald G.**, See *Belinsky, Reinke, Scholz, and Kauffman*, 371
- Todd, E. L.**, See *Tsokos-Kuhn, McMillin-Wood, and Mitchell*, 56
- Toll, Lawrence**, See *Loew, Nienow, Lawson, and Uyeno*, 17
- Tsokos-Kuhn, J. O., Todd, E. L., McMillin-Wood, J. B., and Mitchell, J. R.** ATP-Dependent Calcium Uptake by Rat Liver Plasma Membrane Vesicles: Effect of Alkylating Hepatotoxins *In Vivo*, 56
- Tsuji, Kuniro**, See *Yamada, Isogai, Kagawa, Takayanagi, Hayashi, and Kosuge*, 120
- Turner, John T., Ray-Prenger, Carla, and Bylund, David B.**  $\alpha_2$ -Adrenergic Receptors in the Human Cell Line, HT29: Characterization with the Full Agonist Radioligand [ $^3$ H]UK-14,304 and Inhibition of Adenylate Cyclase, 422

## U

- Ullrich, Susanne, Wollheim, Claes B.** Expression of Both  $\alpha_1$ - and  $\alpha_2$ -Adrenoceptors in an Insulin-Secreting Cell Line: Parallel Studies of Cytosolic Free  $Ca^{2+}$  and Insulin Release, 100
- Uyeno, Edward T.**, See *Loew, Nienow, Lawson, and Toll*, 17

## V

- Van Dijk, C.**, See *Brimfield, Hunter, Lenz, Benschop, Van Dijk, and de Jong*, 32
- VanMeter, W. G.**, See *Varanda, Aracava, Sherby, Eldefrawi, and Albuquerque*, 128

- Varanda, W. A., Aracava, Y., Sherby, S. M., VanMeter, W. G., Eldefrawi, M. E., and Albuquerque, E. X.** The Acetylcholine Receptor of the Neuromuscular Junction Recognizes Mecamylamine as a Noncompetitive Antagonist, 128
- Verbruggen, Alfons.** See *Balzarini, De Clercq, Ayusawa, and Seno*, 581
- von Tungeln, L. S.,** See *Fu and Chou*, 62

## W

- Walker, J. Ken,** See *Pellack-Walker, Evans, and Blumer*, 560
- Wasserman, Linda,** See *Culver, Burch, Potenza, Fenical, and Taylor*, 436
- Watanabe, Masayuki,** See *Seeman, Grigoriadis, Tedesco, George, Svensson, Nilsson, and Neumeyer*, 391
- Watkins, Paul B.,** See *Wrighton, Schuetz, Maurel, Barwick, Bailey, Hartle, Young, and Guzelian*, 312
- Welch, Richard M.,** See *Hawke*, 283
- Werz, Mary Ann, and Macdonald, Robert I.** Barbiturates Decrease Voltage-Dependent Calcium Conductance of Mouse Neurons in Dissociated Cell Culture, 269
- Williams, David E., Hale, Susan E., Muerhoff, A. Scott, and Masters, Bettie Sue Siler.** Rabbit Lung Flavin-Containing Monooxygenase: Purification, Characterization, and Induction during Pregnancy, 381
- WoldeMussie, Elizabeth, Beaven, Michael A.**  $\alpha$ -Fluoromethylhistidine: Kinetics of Uptake and Inhibition of Histamine Synthesis in Basophil (2H3) Cell Cultures, 191
- Wollheim, Claes B.,** See *Ulrich*, 100
- Wrighton, Steven A., Schuetz, Erin G., Watkins, Paul B., Maurel, Patrick, Barwick, Joyce, Bailey, Britney S., Hartle, Heather T., Young, Beverly, and Guzelian, Philip.** Demonstration in Multiple Species of Inducible Hepatic Cytochromes P-450 and Their mRNAs Related to the Glucocorticoid-Inducible Cytochrome P-450 of the Rat, 312
- Wüster, M.,** See *Costa, Gramsch, and Herz*, 146

## Y

- Yamada, Shizuo, Isogai, Mitsutaka, Kagawa, Yoshiyuki, Takayanagi, Noriyasu, Hayashi, Eiichi, Tsuji, Kuniro, and Kosuge, Takuo.** Brain Nicotinic Acetylcholine Receptors: Biochemical Characterization by Neosurugatoxin, 120
- Yeates, R. A., Laufen, H., and Leitold, M.** The Reaction between Organic Nitrates and Sulfhydryl Compounds: A Possible Model System for the Activation of Organic Nitrates, 555
- Yeramian, Edouard, Garbarg, Monique, and Schwartz Jean-Charles.** *N*-Ethylmaleimide-Induced Changes in Agonist Affinity for Histamine H<sub>1</sub>-Receptors in the Guinea Pig Brain, 155
- Young, Beverly,** See *Wrighton, Schuetz, Watkins, Maurel, Barwick, Bailey, Hartle, and Guzelian*, 312

## Z

- Zeitler, Philip, and Handwerker, Stuart.** Arachidonic Acid Stimulates Phosphoinositide Hydrolysis and Human Placental Lactogen Release in an Enriched Fraction of Placental Cells, 549

## CUMULATIVE SUBJECT INDEX FOR VOLUMES 27 AND 28

## A

- Acetaminophen**  
 Ca<sup>2+</sup> uptake and, liver plasma membrane vesicles (rat), **28**, 56  
 metabolic activation and toxicity, **27**, 375  
 metabolism, NMR study, hepatocytes (rat), **27**, 634  
 protein and, covalent adducts, liver (mouse), **27**, 566  
 3-Acetylaminobenzamide, poly(ADP-ribose) inhibition, cultured cells, **28**, 200
- Acetylcholine**  
 nicotinic receptors  
   agonist-induced regulation, PC12 cells, **27**, 409  
   blockade by triphenylmethylphosphonium (frog), **27**, 246  
   carbamate interactions with (electric ray), **27**, 343  
   microtubule-active agents, interactions with, **28**, 10  
   radiolabeled, high affinity binding to muscarinic receptors (rat), **28**, 297  
   receptor, *see* Receptors  
   receptor-ion channel complex, physostigmine channel-blocking and agonist effects (frog), **28**, 527  
   vascular smooth muscle relaxation and (rat), **27**, 210
- Acetylcholinesterase**  
 inhibitory monoclonal antibody to, brain (rabbit), **28**, 539  
 reaction with fluoride, **27**, 630
- N*-Acetyl-*p*-benzoquinone imine, cytotoxicity mechanisms (rat), **28**, 306
- Action potentials, calcium-dependent, barbiturate inhibition, neurons (mouse), **28**, 269
- Adenosine, carbocyclic analog, hypoxanthine and guanine utilization inhibition by, **27**, 666
- S*-Adenosylmethionine, *S*-neplanocylmethionine metabolism and, **28**, 364
- S*-Adenosyl-L-methionine, neplanocin A and, HL-60 cells, effects on, **28**, 45
- S*-Adenosylmethionine decarboxylase, *S*-neplanocylmethionine metabolism and, **28**, 364
- Adenylate cyclase**  
 cannabinoid inhibition of, neuroblastoma cell membranes, **27**, 429  
 catecholamine-sensitive activity, age-related changes, prostate (rat), **27**, 218  
 dopamine inhibition, striatum (rat), **28**, 138  
 fibroblast, phospholipid inhibition, **28**, 331  
 muscarinic inhibition, myocardium (rabbit), **28**, 410  
 octopamine-sensitive, agonist characterization, **28**, 254  
 opioid receptor effects, intact neuroblastoma × glioma hybrid cells, **28**, 146  
 receptor-mediated regulation, platelet, **27**, 1  
 regulation, UK-14,304, HT29 cell line, **28**, 422
- ADP-ribosylation, pertussis toxin effects, cAMP and cGMP, N1E-115 neuroblastoma cells, **28**, 229
- Adrenal chromaffin cells, catecholamine secretion by, microtubule-active agent and acetylcholine receptor interactions, **28**, 10
- Adrenoceptors**  
 α<sub>1</sub> and α<sub>2</sub>  
   epinephrine-stimulated maintained rubidium efflux, hepatocytes (guinea pig), **28**, 431  
   insulin-secreting cell line, **28**, 100  
 DNA-intercalating agents, binding to (rat), **27**, 480
- Aging, catecholamine-sensitive adenylate cyclase activity, changes due to, prostate (rat), **27**, 218
- Agonist/antagonist dynamics, ligand-receptor-competitor systems, **28**, 323
- Agonists**  
 β-adrenergic, receptors for, heart ventricles (chick), **27**, 10  
 γ-aminobutyric acid B, cyclic nucleotide-generating systems and, brain (rat), **27**, 53  
 calcium efflux desensitization induced by, phosphoinositide responses, **27**, 325  
 dopamine, interactions with D<sub>1</sub> receptors (rat), **27**, 171  
 dopaminergic, interactions with D<sub>3</sub> binding sites, striatum (rat), **27**, 184  
 neuronal nicotinic acetylcholine receptor regulation induced by, PC12 cells, **27**, 409  
 D-Ala<sup>2</sup>-D-Leu<sup>5</sup>-enkephalin, ε-opioid receptor and, vas deferens (rat), **28**, 1
- Albumin, human serum, interaction with warfarin, **27**, 263
- Alkylation, hepatotoxins, Ca<sup>2+</sup> uptake and, liver plasma membrane vesicles (rat), **28**, 56
- (*d*)-*N*-Allylnormetazocine, binding sites, brain membranes (rat), **27**, 46
- Alphalaxone, conformational analysis, interactions with model membranes, **27**, 624
- Amiloride, Na<sup>+</sup>-Ca<sup>2+</sup> exchange transport, inhibition by, synaptosomal membranes, **27**, 537
- Amine transport, β-adrenergic receptor-mediated binding *vs.*, **28**, 331
- Aminoazo compounds, extended anilines and, carcinogenicity, **27**, 148
- 3-Aminobenzamide, poly(ADP-ribose) inhibition, cultured cells, **28**, 200
- γ-Aminobutyric acid antagonists, bicycloorthocarboxylate and bicyclopophosphorus ester, **28**, 246
- γ-Aminobutyric acid B agonists, cyclic nucleotide-generating systems and, brain (rat), **27**, 53
- Aminopterin, polyglutamates of (mouse), **27**, 156
- Aminopyrine *N*-demethylase, bispyridyloxybenzene and, liver (mouse), **28**, 445
- Anemia, sickle cell, hemoglobin gelation, dipeptide inhibition of, **28**, 40
- Anesthesia, local, phasic ion channel blockade, **28**, 348
- Anesthetic, membrane perturbation and, geometric requirements, **27**, 624
- Angiotensin-converting enzyme, inhibitors, [Met]-enkephalin-Arg<sup>6</sup>-Phe<sup>7</sup> analgesic activity potentiation, brain (mouse), **28**, 521
- Angiotensin II, receptor binding capacity, inositol trisphosphate release, Ca<sup>2+</sup> mobilization, and phosphorylase activation, liver (rat), **28**, 93
- Anilines, extended, carcinogenicity, **27**, 148
- Antagonist-receptor interactions, β-carbolines, model, **28**, 17
- Anthracycline-iron complexes, thiol-dependent DNA damage produced by, **27**, 356
- Antibodies**  
 monoclonal  
   acetylcholinesterase inhibition, brain (rabbit), **28**, 539  
   cytochrome P-450 analysis with, lymphoblastoid cell line, **27**, 652  
   soman, structural and stereochemical specificity (mouse), **28**, 32
- Anticonvulsants**  
 sodium channels and, voltage clamp analysis, **27**, 549  
 structure-activity correlations, artificial intelligence and, **27**, 86
- Anti-inflammatory drugs  
 nonsteroidal, prostaglandin H synthase and prostacyclin synthase inactivation, **27**, 109

- pyrazolin-5-ones, one-electron redox reactions, **28**, 377
- Antimitotic agents, 6-benzyl-1,3-benzodioxole derivatives, antitubulin activity, **27**, 94
- Antineoplastic agents, 6-benzyl-1,3-benzodioxole derivatives, antitubulin activity, **27**, 94
- Antipyrine, redox properties, **28**, 377
- Aorta
- $\alpha_1$ -adrenergic receptor occupancy and norepinephrine-stimulated calcium flux, nonlinear relationship (rabbit), **27**, 517
  - cytochrome P-450 monooxygenase system (rabbit), **28**, 72
  - phosphorylase  $\alpha$  formation and myosin phosphorylation, nitroprusside, glyceryl trinitrate, and 8-bromo cyclic GMP effects on (rat), **27**, 333
- Apolipoprotein A-I, mRNA, phenobarbital-induced (rat), **27**, 394
- Apomorphine, enantiomers, effects on 3,4-dihydroxyphenylalanine, striatal synaptosomes, **28**, 515
- 1- $\beta$ -D-Arabinofuranosylcytosine
- hydroxyurea and thymidine derivative effects on uptake and metabolism, dividing and quiescent fibroblasts, **28**, 574
  - phorbol ester and, effects, K562 erythroleukemia cell differentiation, **27**, 683
- Arachidonic acid
- melittin effects on, leukocytes and platelets, **28**, 546
  - phosphoinositide hydrolysis and placental lactogen release stimulated by, placental cells, **28**, 549
- Arginine-vasopressin, blood platelet activation by, **28**, 508
- Arginyl residue, phenylglyoxal inactivation of ( $\text{Ca}^{2+} + \text{Mg}^{2+}$ )-ATPase, erythrocytes, **27**, 444
- Arsenite, butyrylcholinesterase inhibition, ligand binding and, **27**, 437
- Aryl hydrocarbon hydroxylase
- inducers, liver (rat), **28**, 357
  - induction potencies, substituent effects, **27**, 656
- Arylnitrenium ions, electrophilic, extended aniline and aminoazo compound carcinogenicity, **27**, 148
- Astrocytoma cells
- $\beta$ -adrenergic receptors, expression, tunicamycin effects, **27**, 507
  - muscarinic receptor subtypes, phosphoinositide hydrolysis and (chick), **27**, 525
  - 1321N1, muscarinic cholinergic receptors of, guanine nucleotide regulation (human), **27**, 32
- ATPase
- ( $\text{Ca}^{2+} + \text{Mg}^{2+}$ ), phenylglyoxal inactivation of, erythrocytes, **27**, 444
  - proton-pumping, proton gradient maintained by,  $\beta$ -adrenergic receptor-mediated binding *vs.* amine transport, **28**, 338
- 13-Azapinane thromboxane  $\text{A}_2$  receptor, *see* Receptors
- Azidocleopride, dopamine  $\text{D}_2$  receptor photoligand, **27**, 193

## B

- Baclofen, cyclic AMP response potentiation by, brain (rat), **27**, 53
- Barbiturates, inhibition, neurons (mouse), **28**, 269
- Basal-lateral membrane, glutathione *S*-conjugate uptake (rat), **28**, 278
- Basophils, 2H3 cells, histamine synthesis, uptake and inhibition, **28**, 191
- BC3H-1 cells, nicotinic receptor agonist sites, irreversible blockade, lophotoxin, **28**, 436
- BE2254, insulin release and, **28**, 100
- Benzene
- metabolites, oxidation potential, DNA synthesis and, L5178YS cells, **28**, 560
  - microsomal metabolism, phenol (rat), **27**, 574
- Benzo( $\alpha$ )pyrene, metabolism, liver microsomes (rabbit), **27**, 296
- Benzo( $\alpha$ )pyrene-3,6-quinone, quinone-quinol redox cycling, glucuronidation and (rat), **27**, 451
- Benzodiazepine
- bicycloorthocarboxylate toxicity, effects on, **28**, 246
  - receptor, *see* Receptors
- 1,4-Benzodiazepine, anticonvulsant activity, structure-activity correlations, artificial intelligence, and, **27**, 86

- 7,8-Benzoflavone, benzo( $\alpha$ )pyrene metabolism, modulation by, liver microsomes (rabbit), **27**, 296
- Benzomorphan, (*d*)-*N*-allylnormetazocine binding sites and, brain membranes (rat), **27**, 46
- 6-Benzyl-1,3-benzodioxole derivatives, antitubulin activity, **27**, 94
- Betaine, rifamycin, intestinal infections, **27**, 103
- 1,3-Bis-2-chloroethyl-1-nitrosourea, *N*-acetyl-*p*-benzoquinone imine cytotoxicity and (rat), **28**, 306
- 4,4'-Bis(methylsulfonyl)-2,2',5,5'-tetrachlorobiphenyl, binding sites, lung cytosol (rat, mouse), **27**, 314
- Bispyridyloxybenzene, structure-activity relationship (mouse), **28**, 445
- Bleomycin, DNA damage induced by, calmodulin antagonist effects, L1210 cells, **27**, 387
- Brain
- acetylcholinesterase, inhibitory monoclonal antibody to (rabbit), **28**, 539
  - [ $^3\text{H}$ ]-D-Ala $^2$ -D-Leu $^5$ -enkephalin binding (rat), **27**, 399
  - (*d*)-*N*-allylnormetazocine binding sites (rat), **27**, 46
  - $\gamma$ -aminobutyric acid B agonists and cyclic AMP (rat), **27**, 53
  - $\text{D}_1$  receptors, dopamine agonist interactions with (rat), **27**, 171
  - drug-induced enkephalin accumulation, mRNA hybridization and radioimmunoassay studies (rat), **28**, 86
  - histamine  $\text{H}_1$ -receptors, *N*-ethylmaleimide effects (guinea pig), **28**, 154
  - 5-hydroxytryptamine-1A serotonin receptor subtype, [ $^3\text{H}$ ]WB4101 labeling (rat), **28**, 487
  - [Met]-enkephalin-Arg $^6$ -Phe $^7$  hydrolysis, angiotensin-converting enzyme effects (mouse), **28**, 521
  - muscarinic receptor heterogeneity, bretylium tosylate and (rat), **27**, 27
  - muscarinic receptors, allosteric inhibitors (rat), **27**, 418
  - nicotinic acetylcholine receptors, neosurugatoxin effects (rat), **28**, 120
  - Bretylium tosylate, muscarinic receptor heterogeneity (rat), **27**, 27
  - para*-(Bromoacetamidyl)benzylcarazolol,  $\beta$ -adrenergic ligand-binding site, covalent labeling, **27**, 499
- Bromobenzene
- $\text{Ca}^{2+}$  uptake and, liver plasma membrane vesicles (rat), **28**, 56
  - metabolism, hepatocytes (rat), **27**, 287
- 8-Bromo cyclic GMP, *see* Cyclic GMP
- (*E*)-5-(2-Bromovinyl)-2'-deoxyuridine derivatives, cytostatic activity, FM3A cells transformed with herpes simplex virus type 1 thymidine kinase gene, **28**, 581
- Butylated hydroxyanisole, *p*-phenetidine oxidation reactive products, trapping with, **27**, 277
- t*-Butylbicyclophosphorothionate, radiolabeled, binding site, **28**, 246
- t*-Butylbicycloorthobenzoate, radiolabeled, binding site, **28**, 246
- Butyrylcholinesterase, cooperativity in ligand binding, **27**, 437

## C

- Calcium
- ATP-dependent uptake, liver plasma membrane vesicles (rat), **28**, 56
  - conductance, voltage-dependent, barbiturate effects, neurons (mouse), **28**, 269
  - muscarinic receptor-mediated efflux, desensitization, phosphoinositide responses, **27**, 325
  - norepinephrine-stimulated flux,  $\alpha_1$ -adrenergic receptor occupancy and, vascular smooth muscle cells (rabbit), **27**, 517
  - rubidium efflux sensitive to, hepatocytes (guinea pig), **28**, 431
- Calcium channel
- agonist and antagonist analogs of nifedipine, conformational features, **27**, 544
  - antagonists, 1,4-dihydropyridine, receptor binding through membrane biolayer, **27**, 612
- Calcium ion
- ATP-dependent uptake, alkylating hepatotoxins and, liver plasma membrane vesicles, **28**, 56
  - cytosolic free, insulin release and, **28**, 100



- Calcium ion—*continued*  
 luteinizing hormone release mediated by, protein kinase C activators, effects (rat), **27**, 532  
 mobilization, receptor binding capacity and, liver (rat), **28**, 93
- Calmodulin  
 antagonists, bleomycin-induced DNA damage and, L1210 cells, **27**, 387  
 synthetic  $\beta$ -endorphin peptide binding to, **28**, 588
- Cannabinoid, adenylate cyclase inhibition, neuroblastoma cell membranes, **27**, 429
- Carbachol, guanine nucleotide-sensitive binding, muscarinic cholinergic receptors, astrocytoma cells (human), **27**, 32
- Carbamates  
 anticholinesterases, actions on nicotinic acetylcholine receptor, comparison (electric ray), **27**, 343  
 ion channel blockade by (frog), **28**, 527
- Carbamazepine, inhibitory actions, voltage-sensitive sodium channels, neuroblastoma cells, voltage clamp analysis, **27**, 549
- Carbamylcholine, pertussis toxin and, effects on cAMP and cGMP, N1E-115 neuroblastoma cells, **28**, 229
- $\beta$ -Carboline, benzodiazepine antagonist, **28**, 17
- Carbonic anhydrase, inhibitors, structure-activity relationship and molecular graphics study, **27**, 493
- Carbon tetrachloride,  $\text{Ca}^{+2}$  uptake and, liver plasma membrane vesicles (rat), **28**, 56
- Carcinogenesis, extended anilines and aminoazo compounds, **27**, 148
- Carcinoma  
 colon  
 ribosomal RNA processing inhibition, **27**, 308  
 sangivamycin and toyocamycin effects, **27**, 349
- Catechol, formation of halogen-substituted estradiols, liver microsomes (hamster), **27**, 559
- Catecholamine  
 adenylate cyclase system sensitive to, age-related changes, prostate (rat), **27**, 218  
 secretion, microtubule-active agent and acetylcholine receptor interactions, **28**, 10
- Cations  
 bivalent, platelet activation by arginine-vasopressin, **28**, 508  
 divalent  
 modulation, substance P, submaxillary gland (rat), **27**, 38  
 sensitivity, guanine nucleotide and, brain (rat), **28**, 487  
 monovalent, agonist interactions with cardiac muscarinic receptors (chick), **28**, 400
- CB 3717, folylpolyglutamate synthetase substrate (mouse), **27**, 156
- C6-2B cells, cholera toxin-stimulated cyclic AMP accumulation, forskolin potentiation of, **28**, 502
- Cell line  
*see also* specific cell line  
 fluorodeoxyuridine-resistant, thymidylate synthase gene amplification (mouse), **28**, 80  
 insulin-secreting, epinephrine and, **28**, 100  
 smooth muscle,  $\beta$ -adrenergic receptor desensitization and resensitization, **28**, 495
- Cerebral cortex, muscarinic receptors, oxotremorine derivative binding to (rat), **28**, 107
- C6 glioma cells,  $\beta$ -adrenergic receptor-mediated binding *vs.* amine transport in, **28**, 331
- CGP-12177,  $\beta$ -adrenergic receptor binding measured by, amine transport and, **28**, 331
- Chloramphenicol, cytochrome P-450 inhibition, isozyme selectivity, liver (rat), **28**, 290
- Chloride channel, bicycloorthocarboxylate and bicyclopophosphorus ester probes, **28**, 246
- 7-Chlorobenz(a)anthracene, stereoselective metabolism, liver microsomes (rat), **28**, 62
- 2-Chloroethylamine, oxotremorine derivative, binding to muscarinic receptors, cerebral cortex (rat), **28**, 107
- Cholera toxin, cyclic AMP accumulation stimulated by, forskolin potentiation, intact C6-2B cells, **28**, 502
- Cholinesterase inhibitor  
 channel-blocking and agonist effects, acetylcholine receptor-ion channel complex (frog), **28**, 527  
 monoclonal antibodies to (mouse), **28**, 32
- Clonidine  
 imidazolidines like, conformational entropy, affinity for  $\alpha$ -adrenergic receptors, **27**, 459  
 insulin release and, **28**, 100  
 rubidium efflux and, hepatocytes (guinea pig), **28**, 431
- Colchicine  
 acetylcholine receptors and, interaction, **28**, 10  
 binding to tubulin, benzyl-benzodioxole derivative effects, **27**, 94
- Colon  
 carcinoma  
 ribosomal RNA processing inhibition, **27**, 308  
 sangivamycin and toyocamycin effects, **27**, 349
- Compartmental analysis, SAAM, ligand-receptor-competitor systems, competitive binding kinetics, **28**, 323
- Convulsants, bicycloorthocarboxylate and bicyclopophosphorus ester,  $\gamma$ -aminobutyric acid antagonists, **28**, 246
- Cyanopindolol, vascular smooth muscle relaxation and (rat), **27**, 210
- Cyclic AMP  
 adenosine-induced  $\text{K}^{+}$  current, oocyte (frog), **28**, 170  
 cholera toxin-stimulated accumulation, forskolin potentiation, intact C6-2B cells, **28**, 502  
 efflux inhibition, erythrocytes (pigeon), **27**, 60  
 formation, dopamine inhibition of, striatal neurons (mouse), **27**, 595  
 pertussis toxin effects, N1E-115 neuroblastoma cells, **28**, 229  
 transmitter-stimulated,  $\gamma$ -aminobutyric acid agonists and, brain (rat), **27**, 53
- Cyclic GMP  
 8-bromo, phosphorylase *a* formation and myosin phosphorylation, effects on, aorta (rat), **27**, 333  
 pertussis toxin effects, N1E-115 neuroblastoma cells, **28**, 229
- Cyclopentenyl adenosine, human promyelocytic leukemia cells, effects on, **28**, 45
- Cysteamine, oxidation, lung flavin-containing monooxygenase, pregnancy and (rabbit), **28**, 381
- Cysteine, reaction with organic nitrates, **28**, 555
- Cytochrome P-450  
 immunospecific forms, hepatocyte culture (rat), **27**, 125  
 inducible, liver (rat, gerbil, hamster, rabbit, mouse), **28**, 313  
 inhibition, chloramphenicol, liver (rat), **28**, 290  
 isozymes, induction, 3,4,5,3'4'5'-hexachlorobiphenyl and (rat), **27**, 676  
 mephenytoin 4-hydroxylation and, liver (rat), **28**, 215  
 monoclonal antibody-directed determination, lymphoblastoid cell line, **27**, 652  
 monooxygenases, specificity and regulation, kidneys (mouse), **28**, 283  
 monooxygenase system, aortic smooth muscle (rabbit), **28**, 72  
 sexual differentiation, liver (rat), **27**, 471  
 suicidal destruction, 3,5-diethoxycarbonyl-1,4-dihydro-2,4,6-trimethylpyrine effects, embryonic liver (chick), **27**, 459  
 trifluoroacetylated, halothane and, liver (rat), **28**, 468
- Cytotoxicity, *N*-acetyl-*p*-benzoquinone imine, mechanisms (rat), **28**, 306

## D

- Dehalogenation, fluoro- and bromo-substituted estradiols, catechol formation, liver microsomes (hamster), **27**, 559
- Deoxycytidine, uptake and metabolism, hydroxyurea and thymidine derivative effects on, dividing and quiescent fibroblasts, **28**, 574
- Deoxyribonucleotide, poly(ADP-ribose) inhibition, cultured cells, **28**, 200
- Dexamethasone, mephenytoin 4-hydroxylation, cytochrome P-450 and, liver (rat), **28**, 215
- Diabetes, zinc-chelating agents, **27**, 366

- Diacylglycerols, protein kinase C and,  $\text{Ca}^{2+}$ -mediated luteinizing hormone release and (rat), **27**, 532
- cis*-Diamminedichloroplatinum(II), DNA damage induced by, mismatch repair, **28**, 51
- 2,3-Dichlorodibenzo-*p*-dioxins, 7-substituted, dioxin receptor binding/aryl hydrocarbon hydroxylase induction, **27**, 656
- S*-(1,2-Dichlorovinyl)glutathione, renal uptake and nephrotoxicity (rat), **28**, 278
- 3,5-Diethoxycarbonyl-1,4-dihydro-2,4,6-trimethylpyrine, ferrochelatase and cytochrome P-450, effects on, embryonic liver (chick), **27**, 459
- trans*-Dihydrodiol metabolites, absolute configurations and optical purities, liver microsomes, **28**, 62
- 1,4-Dihydropyridine, calcium channel antagonists, receptor binding through membrane biolayer, **27**, 612
- ( $\pm$ )-6,7-Dihydroxy-2-aminotetralin, dopamine  $\text{D}_2$  receptor binding sites (pig), **28**, 391
- 3,4-Dihydroxyphenylalanine, apomorphine enantiomer and lisuride effects on, striatal synaptosomes, **28**, 515
- Dinitrotoluene oxidation, hepatic microsomes (rat), **28**, 207
- Dioxin, receptor binding, aryl hydrocarbon hydrolase induction and, substituent effects, **27**, 656
- Dipeptides, hemoglobin gelation, inhibition by, sickle cell anemia, **28**, 40
- Diphenylhydantoin, inhibitory actions, voltage-sensitive sodium channels, neuroblastoma cells, voltage clamp analysis, **27**, 549
- Diterpene lactones, nicotinic receptor agonist site blockade by lophotoxin and, BC3H-1 cells, **28**, 436
- DNA
- bleomycin-induced damage, calmodulin antagonist effects, L1210 cells, **27**, 387
  - cis*-diamminedichloroplatinum(II)-induced, mismatch repair, **28**, 51
  - intercalating agents, interaction with adrenoceptors (rat), **27**, 480
  - mitochondrial, radiation- and epichlorohydrin-induced damage, assessment (mouse), **27**, 167
  - synthesis, benzene metabolism and, L5178YS cells, **28**, 560
  - thiol-dependent damage, anthracycline-iron complexes producing, **27**, 356
- Dopamine
- agonists, interactions with  $\text{D}_1$  receptors (rat), **27**, 171
  - binding to  $\text{D}_1$  dopamine receptors, striatum (rat), **27**, 184
  - receptor, *see* Receptors
- Down-regulation, agonist-induced, growth and recovery from, tunica-mycin and  $\beta$ -adrenergic receptors, astrocytoma cells, **27**, 507

## E

- Electrofocusing, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin binding sites, interaction of indoles with, liver (rat), **28**, 357
- Electron spectroscopy, rifamycin derivative, structure-activity relationships, **27**, 103
- Embryo, liver, ferrochelatase and cytochrome P-450, 3,5-diethoxycarbonyl-1,4-dihydro-2,4,6-trimethylpyrine effects (chick), **27**, 459
- $\beta$ -Endorphin
- $\epsilon$ -opioid receptor and, vas deferens (rat), **28**, 1
  - synthetic peptide, binding to calmodulin, **28**, 588
- Energy-conformation profiles,  $\beta$ -carboline, **28**, 17
- Enkephalin
- [ $^3\text{H}$ ]-D-Ala $^2$ -D-Leu $^5$ , binding, brain membranes (rat), **27**, 399
  - drug-induced accumulation, mRNA hybridization and radioimmunoassay studies, brain (rat), **28**, 86
- Entropy, conformational, clonidine-like imidazolidines, affinity for  $\alpha$ -adrenergic receptors, **27**, 459
- Enzyme
- lysosomal, secretion, neutrophils (rabbit), **27**, 74
  - overproduction, fluorodeoxyuridine-resistant cell lines (mouse), **28**, 80
- Epichlorohydrin, mitochondrial DNA damage induced by, assessment (mouse), **27**, 167

- Epinephrine
- insulin release, RINm5f cells, **28**, 100
  - rubidium efflux and, hepatocytes (guinea pig), **28**, 431
- Erratum, **27**, 324, **27**, 492, **27**, 689, **28**, 235
- Erythrocytes
- ( $\text{Ca}^{2+} + \text{Mg}^{2+}$ )-ATPase and, erythrocytes, **27**, 444
  - cyclic AMP export from, prostaglandin  $\text{A}_1$  effects (pigeon), **27**, 60
  - membranes, transport inhibitor binding to, pH effects on, **27**, 662
- Erythroleukemia cells, K562, 1- $\beta$ -D-arabinofuranosylcytosine and phorbol ester effects, **27**, 683
- Estradiol, halogen-substituted, catechol formation of, liver microsomes (hamster), **27**, 559
- Ethanol, synaptosomal plasma membrane phospholipids, changes induced by (rat), **27**, 256
- N*-Ethylmaleimide
- histamine  $\text{H}_1$  receptors and, brain (guinea pig), **28**, 155
  - leukotriene  $\text{C}_4$  binding and, myocardium (guinea pig), **27**, 236
- Etorphine,  $\epsilon$ -opioid receptor and, vas deferens (rat), **28**, 1

## F

- Fenfluramine, enkephalin accumulation, mRNA hybridization and radioimmunoassay studies, brain (rat), **28**, 86
- Fentanyl,  $\epsilon$ -opioid receptor and, vas deferens (rat), **28**, 1
- Ferrochelatase, activity reduction, 3,5-diethoxycarbonyl-1,4-dihydro-2,4,6-trimethylpyrine effects, embryonic liver (chick), **27**, 459
- Fetus, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin thymotoxicity (mouse), **27**, 133
- Fibroblasts
- adenylate cyclase, phospholipid inhibition, **28**, 331
  - dividing and quiescent, deoxycytidine and arabinofuranosylcytosine uptake and metabolism, hydroxyurea and thymidine derivative effects, **28**, 574
- FK-33824,  $\epsilon$ -opioid receptor and, vas deferens (rat), **28**, 1
- Flavin, monooxygenase containing, lung, pregnancy and (rabbit), **28**, 381
- Flavoprotein, lung, pregnancy and (rabbit), **28**, 381
- Flow cytometry, fluorescence, competitive binding kinetics in ligand-receptor-competitor systems, **28**, 323
- Fluoride
- acetylcholinesterase inhibition, slow rate, **27**, 630
  - butyrylcholinesterase inhibition, ligand binding and, **27**, 437
- 2-Fluoro-2'-deoxycytidine, metabolic channeling, **27**, 584
- Fluorodeoxyuridine
- cells resistant to
  - thymidylate synthase gene amplification (mouse), **28**, 80
  - thymidylate synthase overproduction and gene amplification in, **28**, 461
- $\alpha$ -Fluoromethylhistidine transport, basophil cell cultures, **28**, 191
- 5-Fluorouracil, incorporation into RNA, L1210/0 ascites cells (mouse), **27**, 302
- Flupentixol, agonist interactions with,  $\text{D}_1$  receptors (rat), **27**, 171
- Folypolyglutamate synthetase, substrate specificity (mouse), **27**, 156
- Formylmethionyl-leucyl-phenylalanine, inositol triphosphate accumulation, stimulation by, neutrophils (rabbit), **27**, 74
- Formyl peptide receptor, *see* Receptors
- Forskolin
- adenylate cyclase stimulated by, UK-14,304 effects, HT29 cell line, **28**, 422
  - cholera toxin-stimulated cyclic AMP accumulation potentiation, C6-2B cells, **28**, 502
  - inhibition by baclofen, brain (rat), **27**, 53

## G

- Gene amplification
- thymidylate synthase, fluorodeoxyuridine-resistant cell lines (mouse), **28**, 80
  - thymidylate synthase overproduction and, fluorodeoxyuridine-resistant human cells, **28**, 461

- Glucocorticoids, inducible cytochrome P-450, mRNAs and (rat, gerbil, hamster, rabbit, mouse), **28**, 313
- Glucuronidation, 3-methylcholanthrene effects, quinone-quinol redox cycling and (rat), **27**, 451
- Glutathione  
*N*-acetyl-*p*-benzoquinone imine cytotoxicity and (rat), **28**, 306  
 conjugate, renal uptake (rat), **28**, 278  
 reduced, *p*-phenetidine oxidation reactive product trapping with, **27**, 277
- Glycerol trinitrate, phosphorylase *a* formation and myosin phosphorylation, effects on, aorta (rat), **27**, 333
- Glycogen phosphorylase, activation, receptor binding capacity and, liver (rat), **28**, 93
- Glycoprotein, metabolism, IMP dehydrogenase inhibitor effects on, Sarcoma 180 cells, **28**, 567
- Gonadotropin-releasing hormone, luteinizing hormone release stimulated by, protein kinase C activators, effects (rat), **27**, 532
- Guanine, hypoxanthine and, inhibition, carbocyclic nucleotide analogs, **27**, 666
- Guanine nucleotides  
 acetylcholine binding to muscarinic receptors (rat), **28**, 297  
 agonist interactions with cardiac muscarinic receptors, effects on (chick), **28**, 400  
 regulation of muscarinic receptors, astrocytoma cells (human), **27**, 32
- GTP  
 fibroblast adenylate cyclase inhibition dependent on, **28**, 331  
 muscarinic receptor modulation by, myocardium (rabbit), **28**, 410  
 tubulin-dependent hydrolysis, 6-benzyl-1,3-benzodioxole derivative effects on, **27**, 94
- Guanylate cyclase, activation, reaction between organic nitrates and sulfhydryl compounds, **28**, 555
- Guarded receptor hypothesis, **28**, 348

## H

- Halogen, estradiols substituted for, catechol formation of, liver microsomes (hamster), **27**, 559
- Haloperidol, enkephalin accumulation, mRNA hybridization and radioimmunoassay studies, brain (rat), **28**, 86
- Halothane, cytochrome P-450 trifluoroacetylation by, liver (rat), **28**, 468
- Hapten, specificity and stereospecificity, monoclonal antibodies, soman (mouse), **28**, 32
- 2H3 cells, histamine synthesis, uptake and inhibition, **28**, 191
- Heart  
 muscarinic receptors  
 agonist interactions with (chick), **28**, 400  
 heterogeneity, bretylium tosylate and (rat), **27**, 27  
 subtypes, phosphoinositide hydrolysis and (chick), **27**, 525  
 ventricles,  $\beta$ -adrenergic agonist receptors in (chick), **27**, 10
- HeLa cells,  $\beta$ -adrenergic receptor-mediated binding *vs.* amine transport in, **28**, 331
- Hemoglobin S, solubility, gelation, and polymerization, dipeptide inhibition of, **28**, 40
- Hepatocytes  
 acetaminophen metabolism by, NMR study (rat), **27**, 634  
 adrenergic receptor changes in (rat), **27**, 200  
 bromobenzene metabolism in (rat), **27**, 287  
 cytochrome P-450, immunospecific forms (rat), **27**, 125  
 epinephrine-stimulated maintained rubidium efflux,  $\alpha_1$ - and  $\alpha_2$ -adrenoceptor involvement (guinea pig), **28**, 431
- Hepatotoxicity, alkylating, plasma membrane  $\text{Ca}^{2+}$  uptake and (rat), **28**, 56
- Herpes simplex virus type 1, gene, FM3A cells transformed with, (*E*)-5-(2-bromovinyl)-2'-deoxyuridine derivatives, cytostatic activity, **28**, 581
- 3,4,5,3',4',5'-Hexachlorobiphenyl, cytochrome P-450 isozymes and their mRNAs, induction, liver (rat), **27**, 676

- Histamine  
 receptor, *see* Receptors  
 synthesis inhibition, basophil cell cultures, **28**, 191
- Histidine decarboxylase, activity inhibition, basophil cell cultures, **28**, 191
- Histronicotoxin, binding, microtubule-active agent and acetylcholine receptor interactions, **28**, 10
- HL-60 cells, differentiation, nucleic acid methylation, and *c-myc* mRNA expression, neplanocin A effects, **28**, 45
- HT29 cell line,  $\alpha_2$ -adrenergic receptors in, **28**, 422
- Hydrolysis, phosphoinositide, putative  $\text{M}_1$  muscarinic receptor and, heart and astrocytoma cells (chick), **27**, 525
- Hydroxy-eicosatetraenoic acid, melittin stimulation of, leukocytes and platelets, **28**, 546
- Hydroxylamine, nitrotoluene oxidation and, hepatic microsomes (rat), **28**, 207
- 16 $\alpha$ -Hydroxylase, cytochrome P-450 sexual differentiation (rat), **27**, 471
- N*-Hydroxylation, hepatic microsomes (rat), **28**, 207
- Hydroxynitrobenzylthioinosine, nucleoside transporter of erythrocyte membranes, interaction with, pH effects, **27**, 662
- 5-Hydroxytryptamine, arylazido derivative, serotonin uptake, photo-inactivation (rat), **28**, 185
- Hydroxyurea, effects on deoxycytidine and arabinofuranosylcytosine uptake and metabolism, dividing and quiescent fibroblasts, **28**, 574
- Hypoxanthine (guanine) phosphoribosyltransferase, phosphates of carbocyclic nucleoside analogs inhibiting, **27**, 666

## I

- Idazoxan, insulin release and, **28**, 100
- Imidazolidine, clonidine-like, conformational entropy, affinity for  $\alpha$ -adrenergic receptors, **27**, 459
- Imipramine, transport,  $\beta$ -adrenergic receptor-mediated binding *vs.*, **28**, 331
- Immunoquantitation, cytochrome P-450 monooxygenase system, aortic smooth muscle (rabbit), **28**, 72
- Immunotoxicity, halothane, liver (rat), **28**, 468
- IMP dehydrogenase, inhibitors, glycoprotein metabolism and, Sarcoma 180 cells, **28**, 567
- Indolo[3,2-*b*]carbazole, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin binding sites, interactions with, liver (rat), **28**, 357
- Infection, intestinal, rifamycin effects, **27**, 103
- Inositol phosphates, release, receptor binding capacity and, liver (rat), **28**, 93
- Inositol triphosphate, accumulation, neutrophils (rabbit), **27**, 74
- Insulin  
 release  
 epinephrine and, RINm5F cells, **28**, 100  
 phosphatidylethanolamine *N*-methylation and, pancreatic islets (rat), **27**, 66
- Intelligence, artificial, structure-activity correlations, anticonvulsants, **27**, 86
- Intestine, infections, rifamycin effects, **27**, 103
- Iodocyanopindolol binding, *beta* receptors, kidney (rat), **27**, 19
- Ion channels  
 blockade  
 carbamates (frog), **28**, 527  
 phasic, **28**, 348
- Iron, anthracycline-iron complexes, thiol-dependent DNA damage produced by, **27**, 356
- Isoproterenol, vascular smooth muscle relaxation and (rat), **27**, 210
- Isozyme, selectivity, cytochrome P-450 inhibition by chloramphenicol, liver (rat), **28**, 290

## K

- K562 erythroleukemia cells, differentiation, 1- $\beta$ -D-arabinofuranosylcytosine and phorbol ester effects, **27**, 683

## Kidney

- cytochrome P-450-dependent monooxygenases, specificity and regulation (mouse), **28, 283**
- S-(1,2-dichlorovinyl)glutathione upake (rat), **28, 278**
- mercury-induced damage, proton NMR spectra of urine (rat), **27, 644**
- microsomes, cytochrome P-450-dependent monooxygenases (mouse), **28, 283**

## L

- Lactogen, placental, arachidonic acid-stimulated release, placental cells, **28, 549**
- L1210/0 ascites cells, RNA, 5-fluorouracil incorporation into (mouse), **27, 302**
- L1210 cells, bleomycin-induced DNA damage, calmodulin antagonist effects, **27, 387**
- Leukemia cells, differentiation, nucleic acid methylation, and *c-myc* mRNA expression, neplanocin A effects, **28, 45**
- Leukocytes
  - lipoxygenase activation by melittin, **28, 546**
  - polymorphonuclear, neutrophils and, **28, 323**
- Leukotriene B<sub>4</sub>, stimulation in neutrophils (rabbit), **27, 74**
- Leukotriene C<sub>4</sub>, binding sites, myocardial (guinea pig), **27, 236**
- Leukotrienes, melittin stimulation of, leukocytes and platelets, **28, 546**
- Ligand, binding, cooperativity, butyrylcholinesterase, **27, 437**
- Ligand-receptor conformations, receptor subclasses *vs.* (rat), **27, 27**
- Lipid methyltransferase, S-neplanocylmethionine metabolism and, **28, 364**
- Lipoxygenase, activation, melittin, leukocytes and platelets, **28, 546**
- Lisuride, apomorphine enantiomers and, effects on 3,4-dihydroxyphenylalanine, striatal synaptosomes (rat), **28, 515**
- Liver
  - acetaminophen-protein covalent adducts (mouse), **27, 566**
  - aminopyrine *N*-demethylase activity, bispyridyloxybenzene and (mouse), **28, 445**
  - cytochrome P-450
    - inducible (rat, gerbil, hamster, rabbit, mouse), **28, 313**
    - inhibition by chloramphenicol, isozyme selectivity (rat), **28, 290**
    - mephenytoin 4-hydroxylase (rat), **28, 215**
    - sexual differentiation (rat), **27, 471**
    - trifluoroacetylation by halothane (rat), **28, 468**
  - embryonic, ferrochelatase and cytochrome P-450, 3,5-diethyloxycarbonyl-1,4-dihydro-2,4,6-trimethylpyrrole effects (chick), **27, 459**
  - 3,4,5,3',4',5'-hexachlorobiphenyl, cytochrome P-450 isozymes and their mRNAs, induction (rat), **27, 676**
  - inositol trisphosphate release, Ca<sup>2+</sup> mobilization, and phosphorylase activation, receptor binding capacity and (rat), **28, 93**
  - monooxygenases, methoxychlor contaminants, metabolism and estrogenicity (rat), **27, 115**
  - pentose cycle flux rates (rat), **28, 371**
  - plasma membrane vesicles, ATP-dependent calcium uptake (rat), **28, 56**
  - 2,3,7,8-tetrachlorodibenzo-*p*-dioxin binding sites, interaction of indoles with (rat), **28, 357**
- Liver microsomes
  - benzene metabolism, phenol (rat), **27, 574**
  - benzo(a)pyrene metabolism (rabbit), **27, 296**
  - 7-chlorobenz(a)anthracene, stereoselective metabolism by (rat), **28, 62**
  - fluoro- and bromo-substituted estradiols, catechol formation of (hamster), **27, 559**
  - nitrotoluene metabolite oxidation (rat), **28, 207**
- Lophotoxin, structure-activity relationships, BC3H-1 cells, **28, 436**
- Lung
  - $\beta$ -adrenergic receptor, homologous desensitization (rat), **28, 237**
  - cytosol, polychlorinated biphenyl metabolite binding sites (rat, mouse), **27, 314**
  - flavin-containing monooxygenase, pregnancy, (rabbit), **28, 381**

- Luteinizing hormone, Ca<sup>2+</sup>-mediated release, protein kinase C activators, effects (rat), **27, 532**
- Lymphoblastoid cell line, cytochrome P-450 types, monoclonal antibody-directed determination, **27, 652**
- L5178YS cells, benzene metabolism, DNA synthesis and, **28, 560**

## M

- Magnesium ion
  - agonist interactions with cardiac muscarinic receptors, effects on, heart (chick), **28, 400**
  - fibroblast adenylate cyclase inhibition dependent on, **28, 331**
- McN-A343, pirenzepine and, phosphoinositide hydrolysis and, heart and astrocytoma cells (chick), **27, 525**
- Mecamylamine, neuromuscular transmission and (frog), **28, 128**
- Melittin, lipoxygenase activation by, leukocytes and platelets, **28, 546**
- Mephenytoin, 4-hydroxylation, cytochrome P-450 and, liver (rat), **28, 215**
- Mercury, neprotoxicity induced by, proton NMR spectra of urine (rat), **27, 644**
- Mesenteric artery, relaxation,  $\beta$ -adrenergic receptor-mediated, desensitization (rat), **27, 210**
- [Met]-enkephalin-Arg<sup>6</sup>-Phe<sup>7</sup>, hydrolysis, angiotensin-converting enzyme effects (mouse), **28, 521**
- Methotrexate
  - polyglutamates of (mouse), **27, 156**
  - regiospecific  $\gamma$ -conjugation to poly(L-lysine), **27, 141**
- 3-Methoxybenzamide, poly(ADP-ribose) inhibition, cultured cells, **28, 200**
- Methoxychlor, contaminants, metabolism and estrogenicity, hepatic monooxygenases and (rat), **27, 115**
- Methylation, RNA and DNA, neplanocin A effects, HL-60 cells, **28, 45**
- N*-Methylation, phosphatidylethanolamine, insulin release and, pancreatic islets (rat), **27, 66**
- 3-Methylcholanthrene
  - cytochrome P-450 isozymes, 3,4,5,3',4',5'-hexachlorobiphenyl and, **27, 676**
  - glucuronidation, quinone-quinol redox cycling and (rat), **27, 451**
- Metyrapone, cytochrome P-450, effects on, hepatocyte culture (rat), **27, 125**
- Microsomal oxidases, bicycloorthocarboxylate detoxification, **28, 246**
- Microtubule-active drugs, nicotinic acetylcholine receptors and, interaction, **28, 10**
- Mismatch repair, *cis*-diamminedichloroplatinum(II)-induced DNA damage, **28, 51**
- Mixed-function oxidase, cytochrome P-450 isozymes and their mRNAs, induction, 3,4,5,3',4',5'-hexachlorobiphenyl and (rat), **27, 676**
- Modulated receptor hypothesis, **28, 348**
- Molecular graphics study, quantitative structure-activity relationship and, carbonic anhydrase inhibitors, **27, 493**
- Monoclonal antibody, *see* Antibodies
- Monooleylphosphatidate, fibroblast adenylate cyclase inhibition, **28, 331**
- Monooxygenase
  - cytochrome P-450-dependent, specificity and regulation, kidneys (mouse), **28, 283**
  - hepatic, methoxychlor contaminants, metabolism and estrogenicity (rat), **27, 115**
- Muscle, smooth
  - $\beta$ -adrenergic receptor desensitization and resensitization, **28, 495**
  - muscarinic receptor heterogeneity, bretylium tosylate and (rat), **27, 27**
- vascular
  - $\alpha_1$ -adrenergic receptor occupancy and norepinephrine-stimulated calcium flux (rabbit), **27, 517**
  - cytochrome P-450 monooxygenase system (rabbit), **28, 72**
  - relaxation, desensitization (rat), **27, 210**
- Mycophenolic acid, effects on glycoprotein metabolism, Sarcoma 180 cells, **28, 567**

## Myocardium

- leukotriene C<sub>4</sub> binding sites (guinea pig), **27**, 236
- muscarinic receptor, adenylate cyclase and (rabbit), **28**, 410
- Myosin light chain phosphorylation, nitroprusside, glyceryl trinitrate, and 8-bromo cyclic GMP effects on, aorta (rat), **27**, 333

## N

- Na<sup>+</sup>-Ca<sup>2+</sup> exchange transport, inhibition, amiloride and amiloride analogues, synaptosomal membranes, **27**, 537
- Nafazatrom, redox properties, **28**, 377
- $\beta$ -Naphthoflavone, hepatocytes treated with, bromobenzene metabolism (rat), **27**, 287
- N1E-115 clone, neuroblastoma, muscarinic responses and binding, **27**, 223
- Neosurugatoxin, nicotinic receptors, effects on, brain (rat), **28**, 120
- Nephrotoxicity
  - membrane transport role in (rat), **28**, 278
  - mercury-induced, proton NMR spectra of urine (rat), **27**, 644
- Neplanocin A
  - human promyelocytic leukemia cells, effects on, **28**, 45
  - metabolism, **28**, 364
- S-Neplanocylmethionine, purification and turnover, **28**, 364
- Nerve growth factor, tyrosine hydroxylase phosphorylation regulation, PC12 cells, **28**, 220
- Neuroblastoma
  - cell membranes, cannabinoid inhibition of adenylate cyclase, **27**, 429
  - muscarinic responses and binding, N1E-115 clone, **27**, 223
- Neuroblastoma cells
  - N1E-115, pertussis toxin effects on cAMP and cGMP, **28**, 229
  - voltage-sensitive sodium channels, diphenylhydantoin and carbamazepine inhibitory actions, voltage clamp analysis, **27**, 549
- Neuroleptics, dopamine receptor binding sites (pig), **28**, 391
- Neuromuscular junction, acetylcholine receptor of, mecamlamine effects (frog), **28**, 128
- Neurons
  - dorsal root ganglion, calcium conductance, barbiturates and (mouse), **28**, 269
  - striatal, dopamine receptor inhibition of cyclic AMP formation (mouse), **27**, 595
- Neurotoxin, tryptophan modification and (sea snake), **27**, 79
- Neutrophils
  - inositol triphosphate accumulation in (rabbit), **27**, 74
  - polymorphonuclear leukocytes, **28**, 323
- NG108-15 cells, opioid receptors in, **28**, 146
- Nicotine, radiolabeled, binding assays (rat), **28**, 120
- Nifedipine analogs, conformational features, **27**, 544
- Nitrates, organic, reaction with sulfhydryl compounds, **28**, 555
- Nitrobenzylthioinosine, nucleoside transporter of erythrocyte membranes, interaction with, pH effects on, **27**, 662
- 5-Nitro-2'-deoxyuridine, carbocyclic analogue, antitumor effects, thymidine kinase and thymidylate synthetase role, **27**, 578
- Nitroglycerine, vascular smooth muscle relaxation and (rat), **27**, 210
- Nitroprusside, phosphorylase  $\alpha$  formation and myosin phosphorylation, effects on, aorta (rat), **27**, 333
- Nitrotoluene, oxidation, hepatic microsomes (rat), **28**, 207
- Norepinephrine
  - calcium flux stimulated by,  $\alpha_1$ -adrenergic receptor occupancy and, vascular smooth muscle cells (rabbit), **27**, 517
  - receptor binding capacity, inositol trisphosphate release, Ca<sup>2+</sup> mobilization, and phosphorylase activation, liver (rat), **28**, 93
- Nuclear magnetic resonance
  - acetaminophen metabolism, hepatocytes (rat), **27**, 634
  - proton spectra of urine, nephrotoxicity indicators (rat), **27**, 644
- Nucleosides
  - erythrocyte membrane transporter, binding, pH effects on, **27**, 662
  - pyrimidine, uridine salvage and uridine kinase inhibition, L1210 cells, **28**, 454

## Nucleotides

- carbocyclic, hypoxanthine and guanine inhibition by, **27**, 666
- cyclic, generating systems,  $\gamma$ -aminobutyric acid B agonists and, brain (rat), **27**, 53
- guanine
  - acetylcholine binding to muscarinic receptors (rat), **28**, 297
  - agonist interactions with cardiac muscarinic receptors (chick), **28**, 400
  - divalent cation sensitivity and, brain (rat), **28**, 487
  - modulation, substance P, submaxillary gland (rat), **27**, 38

## O

- Octopamine agonists, phenyliminoimidazolidines, **28**, 254
- Oocyte, membrane currents, adenosine 3',5'-monophosphate role (frog), **28**, 170
- Organophosphate, monoclonal antibodies against, structural and stereochemical specificity (letter), **28**, 32
- Oxidation
  - mixed-function, pentose cycle flux rates and, liver (rat), **28**, 371
  - p*-phenetidine, reactive products formed during, **27**, 277
- Oximes, pyridinium, bisquaternary, allosteric inhibitors of muscarinic receptors, brain (rat), **27**, 418
- Oxotremorine, 2-chloroethylamine derivative, binding to muscarinic receptors, cerebral cortex (rat), **28**, 107
- Oxymorphone, [<sup>3</sup>H]-D-Ala<sup>2</sup>-D-Leu<sup>6</sup>-enkephalin, binding to brain membranes (rat), **27**, 399

## P

- Pancreatic islets, phosphatidylethanolamine *N*-methylation, insulin release and (rat), **27**, 66
- PC12 cells
  - neuronal nicotinic acetylcholine receptor, agonist-induced regulation, **27**, 409
  - tyrosine hydroxylase phosphorylation in, **28**, 220
- Pentose cycle, flux rates, liver (rat), **28**, 371
- Perhydrohistriocotoxin, binding, microtubule-active agent and acetylcholine receptor interactions, **28**, 10
- Peroxidase, *p*-phenetidine oxidation catalyzed by, reactive products formed during, **27**, 277
- Peroxidative metabolism, prostaglandin biosynthesis and, phenylbutazone effects, **27**, 109
- 4a-Peroxyflavin, pregnancy and, lung, **28**, 381
- Peroxy radicals, pyrazolin-5-ones, **28**, 377
- Pertussis toxin
  - carbamylcholine and, effects on cAMP and cGMP, N1E-115 neuroblastoma cells, **28**, 229
  - guanine nucleotide regulation of muscarinic receptors, astrocytoma cells (human), **27**, 32
  - phospholipid inhibition sensitive to, **28**, 331
- Phencyclidine, (*d*)-*N*-allylnormetazocine binding sites and, brain membranes (rat), **27**, 46
- p*-Phenetidine, peroxidase-catalyzed oxidation, reactive products formed during, **27**, 277
- Phenobarbital
  - apolipoprotein A-I mRNA induced by (rat), **27**, 394
  - bicycloorthocarboxylate toxicity, effects on, **28**, 246
  - hepatocytes treated with, bromobenzene metabolism (rat), **27**, 287
  - mephenytoin 4-hydroxylation, cytochrome P-450 and, liver (rat), **28**, 215
- Phenol, benzene metabolism to, liver microsomes (rat), **27**, 574
- Phenoxybenzamine,  $\alpha_2$ -antagonist, platelet (human), **27**, 1
- Phenylbutazone, prostaglandin H synthase and prostacyclin synthase inactivation, **27**, 109
- Phenylephrine
  - insulin release and, **28**, 100
  - rubidium efflux and, hepatocytes (guinea pig), **28**, 431
- Phenylglyoxal, (Ca<sup>2+</sup>+Mg<sup>2+</sup>)-ATPase inactivation, erythrocytes, **27**, 444

- Phenyliminoimidazolidines, octopamine agonists, **28**, 254
- Pheochromocytoma cells, PC12, tyrosine hydroxylase phosphorylation in, **28**, 220
- Phorbol ester, 1- $\beta$ -D-arabinofuranosylcytosine and, effects, K562 erythroleukemia cell differentiation, **27**, 683
- Phosphatidylethanolamine, *N*-methylation, insulin release and, pancreatic islets (rat), **27**, 66
- Phosphoinositide  
breakdown, guanine nucleotide regulation of muscarinic receptors, astrocytoma cells (human), **27**, 32  
hydrolysis  
  arachidonic acid-stimulated, placental cells, **28**, 549  
  calcium desensitization and, **27**, 325  
  putative M<sub>1</sub> muscarinic receptor and, heart and astrocytoma cells (chick), **27**, 525  
  turnover, neutrophils (rabbit), **27**, 74
- Phospholipids  
inhibition, fibroblast adenylate cyclase, **28**, 331  
methyltransferase, ethanol-induced changes (rat), **27**, 256  
synaptosomal plasma membranes, ethanol-induced changes (rat), **27**, 256
- Phosphorylase  $\alpha$ , formation, nitroprusside, glyceryl trinitrate, and 8-bromo cyclic GMP effects on, aorta (rat), **27**, 333
- Phosphorylation, myosin light chain, nitroprusside, glyceryl trinitrate, and 8-bromo cyclic GMP effects on, aorta (rat), **27**, 333
- Photoligand, dopamine D<sub>2</sub> receptors, **27**, 193
- Physalaemin, binding to substance P receptor, submaxillary gland (rat), **27**, 38
- Physostigmine, channel-blocking and agonist effects, acetylcholine receptor-ion channel complex (frog), **28**, 527
- Picrotoxin,  $\gamma$ -aminobutyric acid antagonist, **28**, 246
- Pirenzepine  
  McN-A343 and, phosphoinositide hydrolysis and, heart and astrocytoma cells (chick), **27**, 525  
  muscarinic receptor heterogeneity (rat), **27**, 27
- Placenta cells, phosphoinositide hydrolysis and placental lactogen release, arachidonic acid stimulated, **28**, 549
- Plasma membrane phospholipids, ethanol-induced changes (rat), **27**, 256
- Platelets  
activation, arginine-vasopressin, **28**, 508  
adenylate cyclase regulation,  $\alpha$ <sub>2</sub>-adrenergic receptor mediated (human), **27**, 1  
lipoxygenase activation by melittin, **28**, 546  
thromboxane A<sub>2</sub>/prostaglandin H<sub>2</sub> receptor antagonist, binding (dog), **28**, 163
- Podophyllotoxin analogues, 6-benzyl-1,3-benzodioxole derivatives, **27**, 94
- Poly(ADP-ribose), synthesis inhibitors, specificity, **28**, 200
- Polyamines, cellular levels, **28**, 364
- Polychlorinated biphenyls  
cytochrome P-450 isozymes and their RNAs, induction, liver (rat), **27**, 676  
metabolite, binding sites, lung cytosol (rat, mouse), **27**, 314
- Poly(L-lysine), methotrexate regiospecific  $\gamma$ -conjugation to, **27**, 141
- Polymorphisms, restriction fragment, thymidylate synthase gene amplification, fluorodeoxyuridine-resistant cell lines (mouse), **28**, 80
- Potassium, permeability, calcium-activated, rubidium efflux from hepatocytes (guinea pig), **28**, 431
- Potassium current, adenosine-induced, adenosine 3',5'-monophosphate role, oocyte (frog), **28**, 170
- Potassium ion, elevated, tyrosine hydroxylase phosphorylation regulation, PC12 cells, **28**, 220
- Prazosin  
  insulin release and, **28**, 100  
  rubidium efflux and, hepatocytes (guinea pig), **28**, 431
- Pregnancy, lung flavin-containing monooxygenase and, **28**, 381
- Pregnenolone 16 $\alpha$ -carbonitrile, mephenytoin 4-hydroxylation, cytochrome P-450 and, liver (rat), **28**, 215
- Propranolol, transport,  $\beta$ -adrenergic receptor-mediated binding *vs.*, **28**, 331
- Prostacyclin synthase, inactivation, phenylbutazone, **27**, 109
- Prostaglandin A<sub>1</sub>, cyclic AMP efflux inhibition by, erythrocytes (pigeon), **27**, 60
- Prostaglandin E<sub>1</sub>, cyclic AMP stimulated by, pertussis toxin effects, N1E-115 neuroblastoma cells, **28**, 229
- Prostaglandin H synthase, inactivation, phenylbutazone, **27**, 109
- Prostate, adenylate cyclase activity, age-related changes (rat), **27**, 218
- Protein  
  acetaminophen and, covalent adducts, liver (mouse), **27**, 566  
  guanine nucleotide regulatory, muscarinic cholinergic receptors, astrocytoma cells (human), **27**, 32
- N<sub>i</sub>  
  phospholipid inhibition, **28**, 331  
  stoichiometry, receptor-inhibitory, platelet membranes, **28**, 475
- Protein carboxymethyltransferase, *S*-neplanocylmethionine metabolism and, **28**, 364
- Protein kinase C, diacylglycerols and, Ca<sup>2+</sup>-mediated luteinizing hormone release and (rat), **27**, 532
- Proton gradient,  $\beta$ -adrenergic receptor-mediated binding *vs.* amine transport, carrier system, **28**, 338
- Pyrazolin-5-ones, redox potentials, substituent effects, **28**, 377
- Pyridinium oximes, bisquaternary, allosteric inhibitors of muscarinic receptors brain (rat), **27**, 418
- ## Q
- Quin 2  
  calcium monitoring, insulin release and, **28**, 100  
  fluorescence, receptor binding capacity, inositol trisphosphate, Ca<sup>2+</sup> mobilization, and phosphorylase activation, liver (rat), **28**, 93
- ## R
- Radiation, mitochondrial DNA damage induced by, assessment (mouse), **27**, 167
- Radioligand binding  
  inositol trisphosphate, Ca<sup>2+</sup> mobilization, and phosphorylase activation, liver (rat), **28**, 93  
  platelets (dog), **28**, 163
- Receptor-ion channel complex  
  acetylcholine, physostigmine channel-blocking and agonist effects (frog), **28**, 527  
  microtubule-active agents and, interaction, **28**, 10
- Receptors  
  acetylcholine  
    agonist-induced regulation, PC12 cells, **27**, 409  
    carbamate interactions with (electric ray), **27**, 343  
    neuromuscular transmission, mecamylamine effects (frog), **28**, 128  
    neurotoxin interaction with (sea snake), **27**, 79  
  adrenergic, changes, hepatocytes (rat), **27**, 200  
   $\alpha$ -adrenergic, conformational entropy and affinity, **27**, 459  
   $\alpha_1$ -adrenergic, occupancy, norepinephrine-stimulated calcium flux and, vascular smooth muscle cells (rabbit), **27**, 517  
   $\alpha_2$ -adrenergic  
    adenylate cyclase regulation, platelet, **27**, 1  
    agonist and antagonist binding to, platelet membranes, **28**, 475  
    HT29 cell line, **28**, 422  
   $\beta$ -adrenergic  
    appearance and disappearance, kidney (rat), **27**, 19  
    binding mediated by, amine transport *vs.*, **28**, 331  
    desensitization and resensitization, smooth muscle cell line, **28**, 495  
    expression, tunicamycin effects, astrocytoma cells, **27**, 507  
    homologous desensitization, lung (rat), **28**, 237  
    ligand-binding site, covalent labeling, **27**, 499

## Receptors—continued

- $\beta$ -adrenergic—continued
  - vascular smooth muscle relaxation mediated by, desensitization (rat), **27**, 210
- $\gamma$ -aminobutyric acid B, cyclic nucleotide-generating systems and, brain (rat), **27**, 53
- benzodiazepine, ligand binding, Ro15-1788 molecular structure, **28**, 178
- beta*-adrenergic, agonists, heart ventricles (chick), **27**, 10
- binding
  - phasic ion channel blockade and, **28**, 348
  - ritanserine (rat), **27**, 600
- D<sub>1</sub>, dopamine agonist interactions with, brain (rat), **27**, 171
- dioxin, binding, aryl hydrocarbon hydroxylase induction and, **27**, 656
- dopamine
  - binding sites (pig), **28**, 391
  - cyclic AMP inhibition, striatal neurons (mouse), **27**, 595
  - [<sup>3</sup>H]dopamine binding to, striatum (rat), **27**, 184
  - photoaffinity ligand for, azidocleopride, **27**, 193
  - striatal adenylate cyclase inhibition (rat), **28**, 138
- drug binding through membrane bilayer, **27**, 612
- formyl peptide, rate parameters for unlabeled ligands, **28**, 323
- histamine, *N*-ethylmaleimide effects, brain (guinea pig), **28**, 154
- muscarinic
  - [<sup>3</sup>H]acetylcholine binding to (rat), **28**, 297
  - allosteric inhibitors, brain (rat), **27**, 418
  - calcium efflux mediated by, desensitization, **27**, 325
  - cardiac, agonist interactions with (chick), **28**, 400
  - heterogeneity, interaction with bretylium tosylate and (rat), **27**, 27
  - M<sub>1</sub>, putative, phosphoinositide hydrolysis regulation and, heart and astrocytoma cells (chick), **27**, 525
  - myocardial, adenylate cyclase and (rabbit), **28**, 410
  - responses and binding, neuroblastoma clone, **27**, 223
  - oxotremorine derivative binding to, cerebral cortex (rat), **28**, 107
- muscarinic cholinergic, guanine nucleotide regulation, astrocytoma cells (human), **27**, 32
- nicotinic
  - agonist sites, irreversible blockade, lophotoxin, BC3H-1 cells, **28**, 436
  - blockade by triphenylmethylphosphonium (frog), **27**, 246
- nicotinic acetylcholine, neosurugatoxin effects (rat), **28**, 120
- octopamine, pharmacology, **28**, 254
- opiate, enkephalin binding to brain membranes (rat), **27**, 399
- opioid
  - binding sites (rat), **27**, 46
  - intact neuroblastoma  $\times$  glioma hybrid cells, **28**, 146
  - $\epsilon$ -type, vas deferens (rat), **28**, 1
- serotonin, 5-hydroxytryptamine-1A subtype, [<sup>3</sup>H]WB4101 labeling, brain (rat), **28**, 487
- spare, binding capacity, norepinephrine, angiotensin II, and vasopressin, liver (rat), **28**, 93
- substance P, [<sup>3</sup>H-Tyr<sup>8</sup>]physalaemin binding to, submaxillary gland (rat), **27**, 38
- 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, hydrophobic properties (rat), **27**, 271
- thromboxane A<sub>2</sub>/prostaglandin H<sub>2</sub>, binding to platelets (dog), **28**, 163
- Redox cycles, quinone-quinol, glucuronidation and (rat), **27**, 27
- Renal cortex,  $\beta$ -adrenergic receptors, appearance and disappearance (rat), **27**, 19
- Ribonucleotide, poly(ADP-ribose) inhibition, cultured cells, **28**, 200
- Rifamycin, pyridimidazo, intestinal infections, **27**, 103
- RINm5F cells, insulin release, epinephrine and, **28**, 100
- Ritanserine, receptor-binding properties (rat), **27**, 600
- RNA
  - 5-fluorouracil incorporation into, L1210/0 ascites cells (mouse), **27**, 302
- messenger
  - apolipoprotein A-I, phenobarbital-induced (rat), **27**, 394
  - hybridization, drug-induced enkephalin accumulation, brain (rat), **28**, 86
  - inducible-hepatic cytochrome P-450 and (rat, gerbil, hamster, rabbit, mouse), **28**, 313
  - ribosomal, processing, cytotoxicity and, colon carcinoma cells, **27**, 308
  - ribosomal and messenger, neplanocin A effects, HL-60 cells, **28**, 45
  - sangivamycin and toyocamycin effects dependent on, colon carcinoma cells, **27**, 349
- Ro15-1788, molecular structure, benzodiazepine receptor ligand binding and, **28**, 178
- Rubidium, epinephrine-stimulated efflux,  $\alpha_1$ - and  $\alpha_2$ -adrenoceptor involvement, hepatocytes (guinea pig), **28**, 431

## S

- Sangivamycin, cellular and RNA-dependent effects, colon carcinoma cells, **27**, 349
- Serotonin
  - antagonist, receptor-binding properties (rat), **27**, 600
  - uptake, photoinactivation (rat), **28**, 185
- Sex differences, cytochrome P-450, liver (rat), **27**, 471
- Sickle cell anemia, hemoglobin gelation, dipeptide inhibition of, **28**, 40
- Sodium, cotransport of glutathione *S*-conjugate (rat), **28**, 278
- Sodium channel
  - blockade, **28**, 348
  - voltage-sensitive, diphenylhydantoin and carbamazepine inhibitory actions, voltage clamp analysis, neuroblastoma cells, **27**, 549
- Soman, monoclonal antibodies to, structural and stereochemical specificity (mouse), **28**, 32
- Spiperone, dopamine D<sub>2</sub> receptor binding sites (pig), **28**, 391
- Stimulus-permeability coupling, rubidium efflux from hepatocytes (guinea pig), **28**, 431
- Stoichiometry, receptor-inhibitory nucleotide-binding protein, platelet membranes, **28**, 475
- Striatum
  - adenylate cyclase activity, dopamine inhibition (rat), **28**, 138
  - dopaminergic D<sub>3</sub> binding sites, dopaminergic agonist and antagonist interactions with (rat), **27**, 184
  - neurons, dopamine receptor inhibition of cyclic AMP formation (mouse), **27**, 595
  - synaptosomes, 3,4-dihydroxyphenylalanine production, apomorphine enantiomer and lisuride effects (rat), **28**, 515
- Structure-activity correlations, anticonvulsant activity, artificial intelligence and, **27**, 86
- Structure-activity relationship
  - anthracycline-iron complex-induced DNA damage, **27**, 356
  - bispyridyloxybenzene (mouse), **28**, 445
  - dioxin receptor binding/aryl hydrocarbon hydroxylase induction, substituent effects, **27**, 656
  - lophotoxin, BC3H-1 cells, **28**, 436
  - quantitative, molecular graphics study and, carbonic anhydrase inhibitors, **27**, 493
  - rifamycin derivatives, **27**, 103
  - theoretical,  $\beta$ -carboline, **28**, 17
- Submaxillary gland, substance P receptor, physalaemin binding to (rat), **27**, 38
- Substance P receptor, *see* Receptors
- Sulfhydryl compounds, reaction with organic nitrates, **28**, 555
- Synaptosomal membrane, Na<sup>+</sup>-Ca<sup>2+</sup> exchange transport, inhibition by amiloride and amiloride analogues, **27**, 537
- Synaptosomes, striatal, 3,4-dihydroxyphenylalanine production, apomorphine enantiomer and lisuride effects (rat), **28**, 515

## T

- Tachykinin, physalaemin binding, submaxillary gland (rat), **27**, 38
- Taxol, acetylcholine receptors and, interaction, **28**, 10

Ternary complex model, muscarinic receptor (rabbit), **28**, 410  
 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin  
   receptor, hydrophobic properties (rat), **27**, 271  
   specific binding sites for, interaction of indoles with, liver (rat), **28**, 357  
   thymotoxicity, fetus (mouse), **27**, 133  
 Theophylline, inhibition, potentiation, oocyte (frog), **28**, 170  
 Thermodynamics, calculated, acetaminophen metabolism, **27**, 375  
 Thiols, DNA damage, anthracycline-iron complexes, **27**, 356  
 Thromboxane A<sub>2</sub>/prostaglandin H<sub>2</sub> receptor, *see* Receptors  
 Thymidine derivatives, deoxycytidine and arabinofuranosylcytosine uptake and metabolism, effects on, dividing and quiescent fibroblasts, **28**, 574  
 Thymidine kinase  
   gene, FM3A cells transformed with, (*E*)-5-(2-bromovinyl)-2'-deoxyuridine derivatives, cytostatic activity, **28**, 581  
   thymidylate synthetase and, carbocyclic 5-nitro-2'-deoxyuridine antitumor effects, **27**, 578  
 Thymidylate synthase  
   gene amplification, fluorodeoxyuridine-resistant cell lines (mouse), **28**, 80  
   overproduction, fluorodeoxyuridine-resistant human cells, **28**, 461  
 Thymidylate synthetase, thymidine kinase and, carbocyclic 5-nitro-2'-deoxyuridine antitumor effects, **27**, 578  
 Thymotoxicity, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, fetus (mouse), **27**, 133  
 Tiazofurin, effects on glycoprotein metabolism, Sarcoma 180 cells, **28**, 567  
 Toyocamycin, cellular and RNA-dependent effects, colon carcinoma cells, **27**, 349  
 Triphenylmethylphosphonium, nicotinic acetylcholine receptor blockade by (frog), **27**, 246  
 Troleandomycin, mephenytoin 4-hydroxylation, cytochrome P-450 and, liver (rat), **28**, 215  
 Tryptophan, modification in neurotoxin (sea snake), **27**, 79  
 Tubulin, polymerization and mitosis, benzyl-benzodioxole derivative activity on, **27**, 94  
 Tunicamycin,  $\beta$ -adrenergic receptor expression, effects on, astrocytoma cells, **27**, 507  
 Tyrosine hydroxylase, phosphorylation, PC12 cells, **28**, 220

## U

UK-14,304  
   radiolabeled  
      $\alpha_2$ -adrenergic receptor characterization, HT29 cell line, **28**, 422

  binding stoichiometry, platelet membranes, **28**, 475  
 Uridine, salvage, modified pyrimidine nucleosides, L1210 cells, **28**, 454  
 Uridine kinase, inhibition, modified pyrimidine nucleosides, L1210 cells, **28**, 454  
 Urine, proton NMR spectra, nephrotoxicity indicators (rat), **27**, 644

## V

van der Waals radii, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin binding sites, interaction of indoles with, liver (rat), **28**, 357  
 Vas deferens,  $\epsilon$ -opioid receptor, evidence for (rat), **28**, 1  
 Vasoactive intestinal peptide, adenylate cyclase stimulated by, UK-14,304 effects, HT29 cell line, **28**, 422  
 Vasopressin, receptor binding capacity, inositol trisphosphate release, Ca<sup>2+</sup> mobilization, and phosphorylase activation, liver (rat), **28**, 93  
 Vinblastine, acetylcholine receptors and, interaction, **28**, 10  
 Vincristine, acetylcholine receptors and, interaction, **28**, 10  
 Vindesine, acetylcholine receptors and, interaction, **28**, 10  
 Voltage clamp, diphenylhydantoin and carbamazepine inhibitory actions, voltage-sensitive sodium channels, neuroblastoma cells, **27**, 549

## W

Warfarin, human serum albumin and, interaction, **27**, 263  
 WB4101, radiolabeled, 5-hydroxytryptamine-1A labeling, brain (rat), **28**, 487  
 Western blotting, lung flavin-containing monooxygenase, pregnancy and (rabbit), **28**, 381

## X

X-ray crystallography, structure-activity relationship of bispyridyl-oxybenzene (mouse), **28**, 445

## Y

Yohimbine  
   insulin release and, **28**, 100  
   rubidium efflux and, hepatocytes (guinea pig), **28**, 431

## Z

Zinc, chelating agents, diabetogenic, **27**, 366



---

## Announcement

Dr. William A. Catterall will assume the editorship of *Molecular Pharmacology* on January 1, 1986. Beginning November 1, 1985, all new manuscript submissions should be addressed to him at the following address:

Dr. William A. Catterall, Editor  
*Molecular Pharmacology*  
Department of Pharmacology, SJ-30  
University of Washington  
Seattle, Washington 98195

Revisions of previously submitted manuscripts should be returned to Dr. Joel G. Hardman at Vanderbilt University.

---

## INSTRUCTIONS TO AUTHORS

*Molecular Pharmacology* will publish the results of investigations that contribute significant new information on drug action or selective toxicity at the molecular level. The term "drug" is defined broadly to include chemicals that selectively modify biological function.

Suitable papers are those that describe applications of the methods of biochemistry, biophysics, genetics, and molecular biology to problems in pharmacology or toxicology. Also suitable are reports of fundamental investigations which, although not concerned directly with drugs, nevertheless provide an immediate basis for further study of the molecular mechanism of drug action. Observations of phenomena that shed no light upon underlying molecular interactions are not appropriate for publication. Comparative studies, such as those involving drug-receptor or drug-enzyme interactions that already have been well characterized in other types of cells or tissues, also are inappropriate for publication unless they contribute significant new insight into mechanisms.

Specific areas of interest include: stereochemical, electronic, and other parameters of drug architecture; conformational analysis of receptors and their function; drug-enzyme and other interactions between drugs and macromolecules; drug effects upon gene replication and transcription and on protein synthesis; mechanism of action of antibiotics and other growth-inhibitory drugs; induction by drugs of changes in macromolecular structure or allosteric transitions; drug-induced alterations in metabolic pathways; effects of hormones and other drugs on cellular regulatory mechanisms; chemical mutagenesis, carcinogenesis, and teratogenesis; pharmacogenetics, idiosyncrasies, and drug allergies; selective toxicity in a single organism or in different species; drug actions on properties and functions of membranes; mechanisms of drug metabolism; distribution and transport of drug molecules between biological compartments.

**Page charges.** Authors will be billed at the rate of \$30.00 per page after the paper has been published. It is expected that the page charge will be paid if funds are available for that purpose from the author's institution or from the sponsor of this research. Payment of the charge is not a condition for publication. In case of personal financial hardship, page charges will be waived. Neither the editors nor the reviewers will have knowledge as to who has paid the charge, and this payment always will be considered entirely voluntary.

**Submission of manuscript.** Manuscripts are published in English only and should be sent to **Dr. William A. Catterall, Editor, *Molecular Pharmacology*, Department of Pharmacology, SJ-30, University of Washington, Seattle, Washington 98195, U. S. A.**

The expenses associated with the review of manuscripts submitted to *Molecular Pharmacology* and other ASPET-sponsored journals that are devoted to publishing original research articles have escalated dramatically in recent years because of ever-increasing costs of postage, supplies, and other office expenses, and the growing number of manuscripts submitted for publication. Thus, it has become necessary for ASPET to follow the example of several other scientific societies which have instituted uniform manuscript handling fees. *Therefore, all manuscripts must be accompanied either by a check for \$30 (in U. S. funds drawn on a U. S. bank payable to ASPET) or by a validated purchase order from the authors' institution.* The review process for submitted manuscripts will be delayed until the manuscript handling fee or purchase order is received in the Editor's office. If submission of the manuscript handling fee entails a personal financial hardship to the author(s), the fee will be waived. In that event, the author(s) should submit a request for waiver of the fee when the manuscript is submitted.

Manuscripts should be typewritten double-spaced with ample margins on one side of the paper,  $8\frac{1}{2} \times 11$  inches (ca.  $215 \times 280$  mm). Submit four complete copies of the manuscript and four copies of each figure, plus one original drawing or photograph of each figure. Each half-tone figure requires four original drawings or photographs. All pages should be numbered consecutively beginning with the title page. Limit your reference listings to the minimal number required to document the manuscript adequately. In most instances 30 references or fewer should suffice.

Under usual circumstances reviewers will be instructed to return only their comments to the editorial office and to destroy manuscripts after a final decision on their acceptability has been made.

Original drawings and single copies of manuscripts not accepted for publication will be returned to the authors upon request.

It is understood that the manuscripts and the results they contain will not have been published previously and are not being submitted elsewhere. Manuscripts are accepted for review with the understanding that all persons listed as authors have given their approval for the submission of the paper; further, that any person cited as a source of personal communications has approved such citation. Written authorization may be required at the Editor's discretion. Articles and any other material published in *Molecular Pharmacology* represent the opinions of the author(s) and should not be construed to reflect the opinions of the Editor(s) and the Publisher. If and when a manuscript is published, it will become the sole property of the Journal.

Authors submitting a manuscript do so on the understanding that if it is accepted for publication, copyright in the article, including the right to reproduce the article in all forms and media, shall be assigned exclusively to the Society for Pharmacology and Experimental Therapeutics. No reasonable request by the author for permission to reproduce any of his or her contributions to the journal will be refused.

**Organization and style of manuscripts.** The policy of the Journal is to allow authors maximum freedom in organizing and presenting their material, and in expressing their ideas, provided only that clarity and conciseness are achieved. For most manuscripts, the most suitable format is: (1) Summary, (2) Introduction, (3) Materials and Methods, (4) Results, and (5) Discussion.

Certain conventions must be observed. Chemical and mathematical formulas and abbreviations should follow the *Instructions to Authors of the Journal of Biological Chemistry* (Vol. 260, pp. 1-11, January 10, 1985). Drugs must be referred to by their generic or chemical names throughout the text, but may be identified by trade name in parentheses or a footnote. The systematic name and number given by the Commission on Enzymes of the International Union of Biochemistry should be included for each enzyme of importance in a paper, at the point in the Summary or Introduction where the enzyme is first mentioned. The use of abbreviations should be minimized and abbreviations avoided in the Summary. All essential abbreviations should be defined in a single footnote when first introduced. Abbreviations of journal names should conform to the style of *Biological Abstracts*. References to papers that

have been accepted for publication, but have not appeared, should be cited like other references with the abbreviated name of the journal followed by the words "in press." Copies of such papers should be sent whenever the findings described in them have a direct bearing on the paper being submitted for publication. "Personal Communications" and "Unpublished Observations" should be cited in footnotes to the text and should not be included in the reference list.

A manuscript should include the following, in the order listed: (1) Title. Numbered footnotes to the title should be avoided; acknowledgment of financial support should be given in an unnumbered footnote to the title. (2) Names of authors, their laboratory and institution. (3) A running title, not exceeding 60 characters and spaces. (4) Summary. (5) Text. Footnotes should be referred to by superscript numbers and references by numbers in parentheses. (6) References, numbered according to order of citation in the text, including title and complete pagination. Examples: 1. Goren, J. H., L. G. Baue, and W. Vale. Forces and structural limitations of binding of thyrotropin-releasing receptor: the pyroglutamic acid moiety. *Mol. Pharmacol.* 13:606-614 (1977). 2. Chernow, B., and J. T. O'Brien. Overview of catecholamines in selected endocrine systems, in *Norepinephrine* (M. G. Ziegler and C. R. Lake, eds.). Williams and Wilkins, Baltimore, 439-449 (1984). 3. Snedecor, G. W., and W. G. Cochran. *Statistical Methods*. Iowa State University Press, Ames (1967). (7) Footnotes, numbered according to order of appearance in the text. (8) Tables. (9) Figures. (10) Legends to figures. (11) Name and address of person to receive galley proof.

**Tables.** These should be numbered with arabic numerals and designed to fit the single-column width of the full-page width. Every table should have an explanatory title and sufficient experimental detail in a paragraph following the title to be intelligible without references to the text (unless the procedure is given in the Methods section, or under another table or figure). Footnotes to tables should

appear beneath the tables themselves and should be designated by lower-case italic superscript letters, *a*, *b*, *c*, etc.

**Figures.** These should be numbered with arabic numerals. Each of the four manuscript copies should contain all of the figures. Only the original set need be of quality suitable for reproduction except in the case of half-tones, which require four sets of photographs or original drawings. These should be unmounted glossy photographs (or original India-ink drawings). Usually figures will be reduced to one column width (85 mm) and all numbers *after* such reduction should be at least 1.5 mm high. The figures must be ready, in all respects, for direct reproduction: no lettering or other art work will be done by the publisher. If symbols are not explained on the face of the figure, only standard characters, of which the printer has type, may be used ( $\times$ ,  $\circ$ ,  $\bullet$ ,  $\square$ ,  $\blacksquare$ ,  $\triangle$ ,  $\blacktriangle$ ,  $\odot$ ). The back of each photograph should bear its number, and the legend TOP at the appropriate edge. The list of legends for the figures should give captions and sufficient experimental detail, as required for tables.

**Page proof.** Authors will be billed for substantial changes in page proof. The Editors are very much interested in having accepted contributions appear in the earliest possible issue of the Journal, and therefore request that galley proof be returned within 24 hours after its receipt. In exceptional cases, a "Note added in proof" may be attached and will be published if the Editor approves.

**Reprints and page charges.** An order form for reprints as well as information on the estimation of page charges will be mailed with galley proof. Please direct questions on reprints, page charges, or other business matters to Kay Croker, Executive Officer, American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, Md. 20814. Telephone (301)530-7060.

# Leading Pharmacology Journals

## Publications of the American Society for Pharmacology and Experimental Therapeutics, Inc.

### THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

Editor: **Eva King Killam, PhD**

**JPET** is respected the world over as one of the leading research journals in the field of pharmacology. Readers find broad coverage of all aspects of the interactions of chemicals with biological systems, including autonomic, behavioral, cardiovascular, cellular, clinical, developmental, gastrointestinal, immuno-, neuro-, pulmonary, and renal pharmacology, as well as analgesics, drug abuse, metabolism and disposition, chemotherapy, and toxicology. **Monthly**

### DRUG METABOLISM AND DISPOSITION

*The Biological Fate of Chemicals*

Editor: **Vincent G. Zannoni, PhD**

**DRUG METABOLISM AND DISPOSITION** publishes *in vitro* and *in vivo* experimental results that bring readers significant and original information on xenobiotic metabolism and disposition, including metabolism of all pharmacologic agents or drugs and environmental chemicals, reactants, and preservatives. The areas covered are • pharmacokinetics, pharmacodynamics, and mechanisms • genetic, nutritional, or hormonal factors affecting the biological fate of chemicals • toxicological consequences of xenobiotic metabolism. **Bimonthly**

### PHARMACOLOGICAL REVIEWS

Editor: **James A. Bain, PhD**

**PHARMACOLOGICAL REVIEWS** is a showcase for important review articles in your field, featuring longer papers on topics of high current interest. The areas covered in review papers have included biochemical and cellular pharmacology, drug metabolism and disposition, renal pharmacology, neuropharmacology, behavioral pharmacology, clinical pharmacology, and toxicology. No library serving the pharmacologic community should be without a subscription. **Quarterly**

### MOLECULAR PHARMACOLOGY

Editor: **William A. Catterall, PhD**

The papers published in **MOLECULAR PHARMACOLOGY** are on the cutting edge of research on drug action and selective toxicity at the molecular level. Original applications of biochemistry, biophysics, genetics, and molecular biology are juxtaposed with innovative pharmacologic research to elucidate basic problems in pharmacology and toxicology, including such areas as molecular mechanisms involved in drug receptor-effector coupling, xenobiotic metabolism, and antibiotic and anticancer drug action. **Monthly**

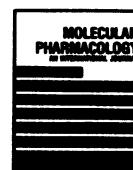
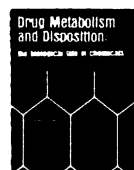


**Order free by phone.** Call 1-800-638-6423 from anywhere in the U.S. except AK and HI. MD residents, call 528-4105 collect.



### Williams & Wilkins

P.O. Box 1496  
Baltimore, Maryland 21203  
266 Fulham Road  
London SW10 9EL England



**YES!** Enter my subscriptions to the following:

Avoid future rate increases and ensure uninterrupted service—enter your multiyear subscriptions today!

#### THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS (monthly)

☐ Individual: \$140/yr ☐ Institutions: \$220/yr  
(Please add \$30.00 outside the U.S.)  
☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

#### DRUG METABOLISM AND DISPOSITION (bimonthly)

☐ Individual: \$60/yr ☐ Institutions: \$95/yr  
(Please add \$10.00 outside the U.S.)  
☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

#### MOLECULAR PHARMACOLOGY (monthly)

☐ Individual: \$75/yr ☐ Institutions: \$165/yr  
(Please add \$15.00 outside the U.S.)  
☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

#### PHARMACOLOGICAL REVIEWS (quarterly)

☐ Individual: \$35/yr ☐ Institutions: \$70/yr ☐ In-training: \$25/yr  
(Please add \$10.00 outside the U.S.)  
☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

#### Payment options:

☐ Check enclosed ☐ Bill me  
☐ VISA ☐ MasterCard ☐ American Express

card # \_\_\_\_\_

signature/P.O.# \_\_\_\_\_

MD residents, please add 5% sales tax. Subscriptions from outside the US and Canada must be prepaid, in US dollars only. Rates valid for orders received before October 31, 1986.

Please allow 10 weeks for delivery of your first issue. Surface mail delivery to countries outside the US may take up to 16 weeks. Airmail rates available upon request. *Residents, fellows, interns, and students* when requesting the in-training rate (to which you are entitled for 3 years), please specify training status and institution.

Rates subject to change without notice.

name \_\_\_\_\_

address \_\_\_\_\_

city state zip \_\_\_\_\_

**Williams & Wilkins**

P.O. Box 1496  
Baltimore, Maryland 21203

266 Fulham Road  
London SW10 9EL, England

ASPETAD 93180 86





An important resource for everyone  
involved in research on the  
metabolism of drugs and chemicals

# DRUG METABOLISM AND DISPOSITION

The Biological Fate of Chemicals

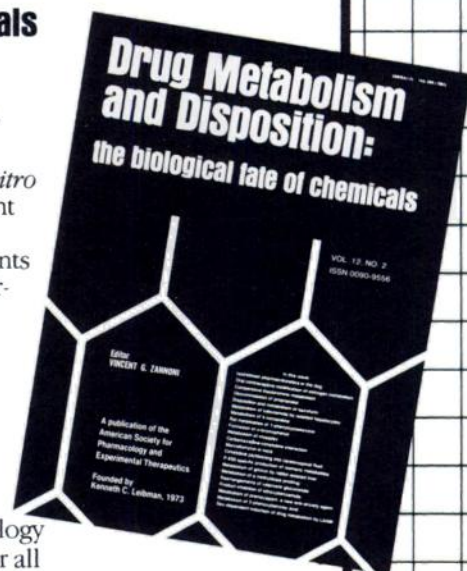
Editor: **Vincent G. Zannoni, PhD**, University of Michigan,  
Ann Arbor, Michigan

**DRUG METABOLISM AND DISPOSITION** publishes *in vitro* and *in vivo* experimental results that bring readers significant and original information on xenobiotic metabolism and disposition, including metabolism of all pharmacologic agents or drugs and environmental chemicals, reactants, and preservatives. All papers are referred to ensure a high standard of publication. The areas covered are:

- pharmacokinetics
- pharmacodynamics
- genetic, nutritional, and hormonal factors affecting the biological fate of chemicals
- toxicological consequences of xenobiotic metabolism

This journal should be a standard reference in all pharmacology and toxicology departments. It is also a valuable resource for all medicinal chemists involved in designing drugs and all biochemists involved with drug metabolism.

**Bimonthly**



## YES! Enter my subscription:

Avoid future rate increases and ensure uninterrupted service—enter your multiyear subscription today!

**Drug Metabolism and Disposition** (bimonthly)

☐ Individual: \$60/yr ☐ Institutions: \$95/yr

(Please add \$10.00 outside the U.S.)

☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

name \_\_\_\_\_

address \_\_\_\_\_

city state zip \_\_\_\_\_

Payment options:

☐ Check enclosed  
☐ VISA

☐ Bill me

☐ MasterCard

☐ American Express

card # \_\_\_\_\_

signature/P.O.# \_\_\_\_\_

MD residents, please add 5% sales tax. Subscriptions from outside the US and Canada must be prepaid, in US dollars only. Rates valid for orders received before October 31, 1986.

Please allow 10 weeks for delivery of your first issue. Surface mail delivery to countries outside the US may take up to 16 weeks. Airmail rates available upon request. *Residents, fellows, interns, and students*, when requesting the in-training rate (to which you are entitled for 3 years), please specify training status and institution.

Rates subject to change without notice.

**Williams & Wilkins**

P.O. Box 1496  
Baltimore, Maryland 21203

266 Fulham Road  
London SW10 9EL, England

DMDAD 93774 86





Quarterly journal devoted  
entirely to in-depth review articles

# PHARMACOLOGICAL REVIEWS

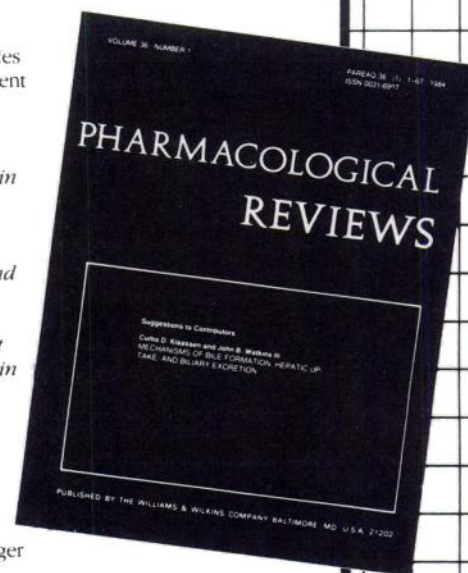
Editor: **James A. Bain, PhD**, Emory University, Atlanta, Georgia

**PHARMACOLOGICAL REVIEWS** is a showcase for important review articles in your field, featuring longer papers on topics of high current interest. Recent major reviews include:

The Parasympathetic Neuroeffector Junction of the Heart, *by Konrad Löffelholz and Achilles J. Pappano*  
N-Acetylation Pharmacogenetics, *by Wendell W. Weber and David W. Hein*  
The Biophysical Pharmacology of Calcium-Dependent Acetylcholine Secretion, *by Eugene M. Silinsky*  
Aging and Drug Disposition: An Update, *by Douglas L. Schmucker*  
Pharmacological Aspects of the Chewing of Khat Leaves, *by Peter Kalix and Olav Braenden*  
Presynaptic, Ganglionic, and Gastrointestinal Dopamine Receptors in the Periphery, *by J. L. Williams, W. A. Buylaert, R. A. Lefebvre, & M. G. Bogaert*  
Bromocriptine in Parkinson's Disease, *by A. N. Lieberman and M. Goldstein*  
Cellular Effects of Cannabis, *by Billy R. Martin and Louis S. Harris*  
Neurotransmitter Regulation of Anterior Pituitary Hormones, *by Jouko Toumisto and P. Mannisto*  
Norepinephrine and the Antibody Response, *by Virginia Sanders and Albert Munson*  
Behavioral Toxicology, *by D. C. McMillan and Galen Wenger*

**PHARMACOLOGICAL REVIEWS** continues to publish the important, longer papers of interest to pharmacologists, physiologists, toxicologists, and biological chemists. No library serving the pharmacologist should be without a subscription.

Quarterly



## YES! Enter my subscription:

Avoid future rate increases and ensure uninterrupted service—enter your multiyear subscription today!

### Pharmacological Reviews (quarterly)

☐ Individual: \$35/yr ☐ Institutions: \$70/yr ☐ In-training: \$25/yr  
(Please add \$10.00 outside the U.S.)  
☐ New Subscription ☐ Renewal ☐ 3 yrs ☐ 2 yrs ☐ 1 yr

name \_\_\_\_\_

address \_\_\_\_\_

city state zip \_\_\_\_\_

### Payment options:

☐ Check enclosed ☐ Bill me  
☐ VISA ☐ MasterCard ☐ American Express

card # \_\_\_\_\_

signature/P.O.# \_\_\_\_\_

MD residents, please add 5% sales tax. Subscriptions from outside the US and Canada must be prepaid, in US dollars only. Rates valid for orders received before October 31, 1986.

Please allow 10 weeks for delivery of your first issue. Surface mail delivery to countries outside the US may take up to 16 weeks. Airmail rates available upon request. Residents, fellows, interns, and students, when requesting the in-training rate (to which you are entitled for 3 years), please specify training status and institution.

Rates subject to change without notice.

**Williams & Wilkins**

P.O. Box 1496  
Baltimore, Maryland 21203

266 Fulham Road  
London SW10 9EL, England

PTSAD 93772 86

