in two volumes . . .

# Evaluation of Drug Activities: Pharmacometrics

Edited by D. R. Laurence and A. L. Bacharach

The object of this book is to provide a review and a critical discussion of general and special pharmacological techniques used in the search for new drugs. In what has been called pharmacometrics, a study is made of a single substance or a comparison is made between two or more substances to determine relative biological activities as a guide to therapeutic values. General considerations, including methodological principles and statistical procedures, are the subject of detailed discussion in the first seven chapters. The other thirty-four chapters deal with the individual kinds of drug activity, as characterised by the nature of the target organ or tissue to be affected or by the pharmacological procedure involved. This guide for practising pharmacologists should also enable biochemists, physiologists and others to perform pharmacometric evaluations of which they have had no previous experience. An appendix gives the compositions of various organ bath solutions in current use.

#### (L186) Volume 1: 1964, 456 pp., 95s./\$15.00

#### **CONTENTS:**

#### Part I. General Principles

D. R. Laurence: First Clinical Trials of Potential Drugs. John R. Vane: A Plan for Evaluating Potential Drugs. Chr. L. Rümke and H. De Jonge: Design, Statistical Analysis and Interpretation. Annie M. Brown: Strain and Sex Differences in Response to Drugs. Chr. L. Rümke: Some Limitations of Animal Tests. G. E. Paget and J. M. Barnes: Toxicity Tests. G. A. Deneau and M. H. Seevers: Drug Dependence.

#### Part II. Particular Applications

H. O. J. Collier: Analgesics. J. H. Weatherby: Local Anaesthetics. Erik Jacobsen: Tranquilisers and Sedatives. Graham Chen: Antidepressives, Analeptics and Appetite Suppressants. D. F. J. Mason: Hypnotics and General Anaesthetics. James E. P. Toman and Guy M. Everett: Anticonvulsants. Vernon G. Vernier: AntiParkinsonian Agents. Edward F. Domino: Centrally Acting Skeletal Muscle Relaxants. W. C. Bowman: Neuromuscular Blocking Agents. Theodore G. Brown and A. M. Lands: Cardiovascular Activity of Sympathomimetic Amines. A. F. Green and A. L. A. Boura: Depressants of Peripheral Sympathetic Nerve Function. A. L. A. Boura and A. F. Green: Antihypertensive Agents.

### (L188) Volume 2: February 1965, 444 pp., 90s./\$14.00

F. Hobbiger: Anticholinesterases. J. L. Broadbent and W. A. Bain: Histamine Antagonists. H. L. Borison: Selective Brain Stem Depressants: Antiemetics, Antitussives, Antihypertensives, Antipyretics. D. D. Bonnycastle: Agents Acting on the Alimentary Tract. J. G. Widdicombe: Drugs Affecting the Respiratory Tract. L. Golberg and L. E. Martin: Iron-containing Haematinics. M. J. Cross: Coagulants and Anticoagulants. William C. Holland and A. H. Briggs: Cardioactive Agents. Michael Ginsburg: Diuretics and Antidiuretics. M. Schachter and J. Morley: Biologically Active Polypeptides. A. Jarrett: Dermatological Agents. G. K. Suchowsky: Oestrogens, Androgens and Progestagens. P. A. Desaulles: Adrenocorticoid Activity. C. M. Kagawa: Adrenocortical Antagonists. E. Tomich: Thyroxine Analogues (Thyroxine Antagonists and Thyromimetics). W. P. Vanderlaan, A. E. Jones and U. J. Lewis: Antithyroid Agents. Auguste Loubatières: Hypoglycaemic Agents. B. W. Fox and H. Jackson: Antifertility Agents. W. G. Spector and D. A. Willoughby: Antiinflammatory Agents. T. A. Connors and F. J. C. Roe: Antitumour Agents. Rodolfo Paoletti and Remo Fumagalfi: Blood Cholesterol Depressants.

APPENDIX: COMPOSITIONS OF SOME ORGAN BATH SOLUTIONS ALPHABETICAL GUIDE TO CHAPTER CONTENTS.





## MOLECULAR PHARMACOLOGY

The Mode of Action of Biologically Active Compounds Edited by E. J. Ariëns

Volume 3 of Medicinal Chemistry A Series of Monographs Edited by George deStevens **Volume 1,** 1964, 501 pp., \$17.00 **Volume 2,** 1964, 280 pp., \$10.00

MOLECULAR PHARMACOLOGY will be of interest to anyone dealing with the biological activity of chemical compounds, including, in addition to pharmacologists, workers in the field of general therapeutics, chemotherapy of infectious diseases, cancer research, pesticides, phytopharmacology, olfaction, and related disciplines. The information in the volumes will also be of use for biochemists, physiologists, and endocrinologists using chemical compounds as tools in their research.

The authors approach the pharmacological aspects of their specific fields on the basis of the physicochemical interaction of the molecules of these pharmacodynamic substances with the molecules of the biological object.

#### Contents of Volume 1:

**D. K. deJongh,** Some Introductory Remarks on the Conception of Receptors

Part 1: A Molecular Approach to General Pharmacology E. J. Ariëns, G. A. J. van Os, A. M. Simonis, and J. M. van Rossum

Drug Transference: Distribution of Drugs in the Organism. Drug Transference: Drug Metabolism. Drug-Receptor Interaction: Interaction of One or More Drugs with One Receptor System. Drug-Receptor Interaction: Interaction of One or More Drugs with Different Receptor Systems. The Relation Between Stimulus and Effect.

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Contents of Volume 2:

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M. G. J. Beets

Part III: The Molecular Basis of Cancer Chemotherapy

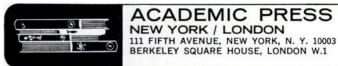
P. Emmelot

Part IV: Receptor Theory in Enzymology

J. M. van Rossum

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#### INSTRUCTIONS TO AUTHORS

Molecular Pharmacology will publish the results of investigations that elucidate mechanisms of drug action or of toxicity at the molecular level. The term, "drug," is defined broadly, to include any chemical agent that selectively modifies biologic function.

Suitable papers are those which describe applications of the methods of biochemistry, biophysics, genetics, and molecular biology to pharmacologic or toxicologic problems. Also suitable are reports of fundamental investigations which, although not concerned 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 regarded as appropriate for publication.

Specific areas of interest include: stereochemical, electronic, and other parameters of drug architecture; conformation 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; drug-induced changes in macromolecular structure, 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; drug metabolism; distribution and transport of drug molecules between biologic compartments.

"Short Communications" will be considered for rapid publication if their subject matter lies within the scope of the journal, and if they are concise. They may contain experimental observations, theoretical material, or significant comment upon published investigations.

Submission of manuscripts. Manuscripts are published in English only and should be sent to the Editor, Prof. Avram Goldstein, Department of Pharmacology, Stanford University School of Medicine, Palo Alto, California 94304. Papers should be typewritten double spaced on one side of paper 216 × 279 mm (8½ × 11 inches). Three complete copies are required. It is understood that the manuscripts and the data they contain have not been published previously and are not being submitted elsewhere.

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 a fairly high density of information are achieved. Certain conventions must be followed, and these are set forth below.

Chemical and mathematical formulas and abbreviations should follow the requirements of the Journal of Biological Chemistry, as described in their Instructions to Authors and Terminology and Abbreviations (Vol. 240, No. 1, January 1965, pp. i-vi). Drugs must be referred to by their generic or chemical names throughout the text, but may be identified by trade name in a footnote. Abbreviations may be employed if they

are defined parenthetically or in a footnote when first introduced. Abbreviations of journal names should conform to the style of Chemical 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 included parenthetically in the text and should not be included in the reference list.

A manuscript should include the following, in the order listed: (1) Title. (2) Names of authors, their laboratory and institution. (3) Running title. (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, and cited as in the following example:

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Tables. These should be numbered with arabic numerals and should be designed to fit the single-column width (68 mm) or the page width. Every table should have an explanatory title and sufficient experimental detail in a paragraph following the title to be intelligible without reference 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 superscript letters, a, b, c, etc.

Figures. These should be numbered with arabic numerals. Each manuscript copy should contain all the figures, but only the original set need be of quality suitable for reproduction; these should be unmounted glossy photographs (or original India-ink drawings) in which the width of the actual material to be reproduced is 140 mm (5.5 inches). Usually this will be reduced by one-half in order to fit the column width, but occasionally the full-page width will be used. On the figures

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