#### The Journal of **PHARMACOLOGY**

Volume 227 OCTOBER-DECEMBER

#### AND EXPERIMENTAL THERAPEUTICS

A Publication of The American Society for Pharmacology and Experimental Therapeutics

Founded by John J. Abel 1909

#### **EDITOR**

**Eva King Killam** 

**ASSISTANT EDITOR** 

Mannfred A. Hollinger

#### **EDITORS FOR SPECIFIC FIELDS**

Analgesia and Drug Abuse Joseph Cochin

Autonomic Pharmacology

Joseph J. McPhillips Robert E. Stitzel

Behavioral Pharmacology John A. Harvey

Cardiovascular Pharmacology

Henry R. Besch, Jr. Theodore M. Brody Donald V. Priola

Cell Pharmacology

Toshio Narahashi George B. Weiss

Chemotherapy

H. George Mandel

Developmental Pharmacology

Bernard L. Mirkin

Drug Metabolism and Disposition

**Edward Bresnick** Jordan L. Holtzman

Endocrine Pharmacology

Paula H. Stern

Gastrointestinal Pharmacology

Thomas F. Burks

Immunopharmacology

**Sydney Spector** 

Neuropharmacology

S. J. Enna

A. James Hance Charles O. Rutledge

Prostaglandins and Leukotrienes

John C. McGiff

Pulmonary Pharmacology

Mannfred A. Hollinger Renal Pharmacology

William O. Berndt

Toxicology

Curtis D. Klaassen

#### **EDITORIAL ADVISORY BOARD**

Wayne Levin

Martin W Adler Edson X. Albuquerque Edmund G. Anderson Lewis Aronow Leslie E. Bailey Michael D. Bailie Robert L. Balster Paul Bass John A. Bevan C. Paul Bianchi Leslie C. Blaber David A. Blake Floyd E. Bloom Gary Brooker Carl K. Buckner David B. Bylund Theodore J. Cicero Doris H. Clouet Leonard Cook Charles R. Craig E. E. Daniel William C. de Groat Louis Diamond Walter R. Dixon James S. Douglas J. W. Downie Sue Piper Duckles

Linda Dykstra

Hugh L. Evans James A. Ferrendelli Gregory D. Fink Lawrence J. Fischer William W. Fleming Ray W. Fuller Timothy S. Gaginella Gerard L. Gebber James W. Gibb Shri N. Giri Dora B. Goldstein Frank R. Goodman Charles W. Gorodetzky Theodore E. Gram Garrett J. Gross T. Kendall Harden Harold F. Hardman Louis S. Harris Richard J. Head Philip C. Hoffmann Stephen G. Holtzman Jerry B. Hook David M. Jacobowitz Donald R. Jasinski Alain F. Junod S. M. Kirpekar Conan Kornetsky Edwin A. Kroeger

Louis Levy Roberto Levi George E. Lindenmayer Stephen L. Lipsius Walter Lovenberg Benedict R. Lucchesi K. U. Malik Thomas A. McCalden Donald E. McMillan Jerry Mitchell Perry B. Molinoff W. H. Morse Kevin Mullane Jose M. Musacchio Mary J. Mycek Robert A. Neal Philip Needleman Achilles J. Pappano William A. Pettinger Larissa A. Pohorecky Russell A. Prough James W. Putney, Jr. **Arthur Raines** G. Alan Robison C. R. Ross Carl E. Rosow Ronald P. Rubin

Betty I. Sasyniuk Arnold Schwartz Lewis S. Seiden Eric J. Simon Roger P. Smith John L. Sutko **Boris Tabakoff** Robert I. Taber A. E. Takemori Robert E. Ten Eick Thomas R. Tephly Richard E. Tessel C. D. Thron U. Trendelenburg Betty M. Twarog Norman J. Uretsky Ladislav Volicer Martin A. Wasserman I. M. Weiner Benjamin Weiss Richard M. Welch David P. Westfall Grant R. Wilkinson Martin M. Winbury Barry B. Wolfe Ben G. Zimmerman

Robert R. Ruffolo, Jr.

#### **BOARD OF PUBLICATIONS TRUSTEES**

Norman Weiner, Chairman: James A. Bain, Joel G. Hardman, Eva King Killam, Bettie Sue Masters Jerry R. Mitchell, Walter Modell, Paul L. Munson, Clement A. Stone, Palmer W. Taylor, Vincent G. Zannoni

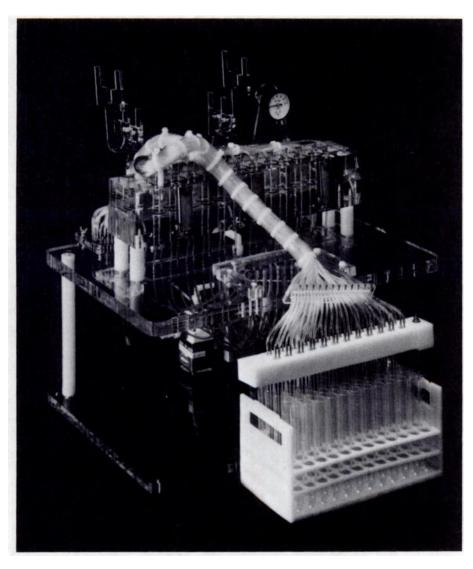
#### **EXECUTIVE OFFICER OF THE SOCIETY**

Kay A. Croker

THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS (ISSN 0022-3565) is published monthly by The American Society for Pharmacology and Experimental Therapeutics, 428 E. Preston Street, Baltimore, MD 21202. Annual dues includes \$60.00 for journal subscription. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: Send address changes (Form 3579) to Williams & Wilkins, 428 E. Preston St., Baltimore, MD 21202. Indexed by Current Contents and Index Medicus. Subscription rates \$140.00 (\$165.00 foreign); institutions \$220.00 (\$245 foreign) single copy \$16.00 (\$19.00 foreign). Copyright © 1983 by The American Society for Pharmacology and Experimental Therapeutics



## Harvester for Receptor Binding Assays



#### **Advantages**

- Eliminates need for individual filter discs
- Works from small or large test tubes
- 24 samples done at one time
- Ability to collect radioactive waste separately

For more information, call or write to:

#### BRANDEL

Biomedical Research and Development Laboratories 16632 Oakmont Avenue Gaithersburg, MD 20877 (301) 948-6506

#### **AUTHOR INDEX**

Abernethy, D. R., 98 Adler-Graschinsky, E., 205 Akima, M., 220 Annau, Z., 167 Arai, M., 78 Arendt, R. M., 98 Au, J. L.-S., 174 Awad, R., 60 Baraona, E., 78 Baum, B. J., 238 Bick, P. H., 130 Bolla, R. I., 139 Bonin, J. D., 98 Brater, D. C., 92 Breese, G., 229 Burch, R. M., 84 Burks, T. F., 22 Carroll, M. E., 28 Chennavasin, P., 92 Davis, B. B., 139 deJong, R. H., 98 Deth, R. C., 60 Dewey, W. L., 42 Ehrenberg, B. L., 98 Enero, M. A., 187 Feies-Toth, G., 215 Fischer, H. R., 68 Fitzpatrick, T. M., 244 Frölich, J. C., 215 Fuhrman-Lane, C., 248 Galloway, M. P., 1 Giles, H. G., 98

Goldstein, D. B., 150 Gordon, E. R., 78 Granata, A. R., 187 Greenblatt, D. J., 98 Grignolo, A., 73 Halushka, P. V., 84 Hand, A. R., 238 Heisler, S., 107 Heldsinger, A. A., 115 Herling, S., 160 Holohan, P. D., 122 Holsapple, M. P., 130 Hook, J. B., 55 Hoshino, E., 220 Hurwitz, A., 68 Iacopino. V. J., 244 Jauhonen, P., 78 Johnson, M. D., 254 Kajiwara, A., 199 Kalivas, P. W., 229 Kaojarern, S., 92 Kasher, J. S., 122 Katims, J. J., 167 Koepke, J. P., 73 Kot, P. A., 244 Kousvelari, E. E., 238 Krieger, E. M., 187 Kuhn, C. M., 181 Kusiak, J. W., 238 Langer, S. Z., 187 Lau, H. S. H., 51

Leander, J. D., 35 Lieber, C. S., 78 Light, K. C., 73 Marafino, B. J., Jr., 9 Matsumoto, M., 16 Mattammal, M. B., 139 McMillian, M. K., 181 Mills, E., 254 Munson, A. E., 130 Munson, J. A., 130 Muramatsu, I., 194 Naray-Fejes-Toth, A., 215 Nomura, F., 78 Obrist, P. A., 73 Ohizumi, Y., 199 Opgenorth, T. J., 144 Ortiz, E., 248 Oshita, M., 194 Palmier, M. O., 139 Payne, R., 60 Pesce, G., 205 Pikkarainen, P. H., 78 Pitha, J., 238 Porreca, F., 22 Prange, A. J., Jr., 229 Ramwell, P. W., 244 Reisine, T., 107 Riker, W. K., 16 Rose, J. C., 244 Ross, C. R., 122

Roth, R. H., 1

Rustum, Y., 174 Sakai, K., 220 Schanberg, S. M., 181, 254 Sellers, E. M., 98 Shader, R. I., 98 Shannon, H. E., 160 Shih, L.-J., 51 Shiraki, Y., 220 Shiverick, K. T., 248 Skoglund, M. L., 115 Smith, D. E., 51 Smith, P. G., 254 Snow, A. E., 42 Snyder, S. H., 167 Spealman, R. D., 154 Stanley, D., 229 Stebbing, N., 9 Stotz, D. C., 28 Stroo, W. E., 55 Thomsen, R. H., 260 Tokazewski-Chen, S. A., 9 Vinik, A. I., 115 Walker, J. S., 174 Widerlöv, E., 229 Wilson, D. F., 260 Wise, W. C., 84 Yamanaka, K., 194 Yasumoto, T., 199 Zaechelein, R., 150 Zehr, J. E., 144 Zenser, T. V., 139

#### Notice to Contributors (Revised July 1, 1983)

#### Scope of Submitted Manuscripts

The Journal invites for review original papers dealing with the interactions of chemicals with biological systems. Any aspect of pharmacology and therapeutics is included, but descriptive case reports without dose response or mechanism studies are usually not accepted. Manuscripts dealing primarily with new methods will be reviewed only if data are presented showing new or more reliable pharmacological information has been obtained by use of the methods or the methods are shown to lead to new or more reliable data than were previously attained.

#### **Submission of Manuscripts**

Manuscripts should be submitted in four copies to Dr. Eva King Killam, Editor in Chief, Journal of Pharmacology and Experimental Therapeutics, Department of Pharmacology, School of Medicine, University of California, Davis, California 95616, and accompanied by a check or purchase order for \$30.00 manuscript handling fee (in U.S. funds payable to ASPET). If submission of the manuscript handling fee entails personal financial hardship to the author, the fee will be waived. In that event the authors should submit a request for waiver of the fee at the time the manuscript is submitted.

Manuscripts should be typewritten double spaced in the English language using one side only of approximately 21.6 by 28 cm paper. One original drawing or photograph of each line figure and three (3) clear copies will be sufficient, 4 original drawings or photographs are required of each halftone figure. Pages should not be stapled together.

It is understood that neither the manuscript nor the data it contains have been previously published nor are being submitted elsewhere for publication. Manuscripts are accepted for review with the understanding that all authors listed have approved submission of the paper and that persons cited for unpublished work have approved such citation.

Authors submitting a manuscript do so with 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. It will be necessary for all authors to sign an assignment of copyright form which will be mailed from the Editorial Office on acceptance of the manuscript. The only exceptions will be manuscripts on work done by employees of the U.S. Federal Government.

#### Organization of the Manuscript

In most cases manuscripts should contain the following sections in the order listed: 1) title page; 2) running title page; 3) abstract; 4) introduction; 5) methods; 6) results; 7) discussion; 8) acknowledgments; 9) references; 10) footnotes; 11) tables; 12) legends for figures; 13) figures; and 14) index terms. Each section should begin on a new page and all pages should be numbered consecutively.

- Title page. This should contain the complete title of the manuscript, the names of all authors and the laboratory of origin.
- 2. Running title page. 1) Each published paper needs a running title to appear at the top of each page in the Journal. The running title should contain no more than 35 spaces, including punctuation. It should convey the sense of the full title. Commonly used abbreviations (such as "ATP," "ACh," etc.) may be used in the running title. 2) This page should also contain the name, address and telephone number of the person to whom page proof should be sent. 3) A list of abbreviations used in the paper should appear on this page. Additionally, each abbreviation should be defined the first time it is used in the text.
- 3. Abstract. The abstract should present in a concise form the purpose, the general methods, the findings and the conclusions of the manuscript. Abstracts should be limited to 200 words; abstracts of more than 250 words will not be accepted.
- 4. Introduction. This section should not be labeled, but should begin on a new page. It should contain a clear statement

of the aims of the reported work or of the hypotheses which the work was designed to test. A brief account of the background of the reported work may also be given in this section.

- 5. Methods. This section should contain explicit, concise descriptions of all new methods or procedures employed. Modifications of previously published methods should be described. Commonly used methods require only a citation of the original source. When methods are described, the description should be such as to enable the reader to judge their accuracy, reproducibility and reliability and to repeat the experiment. Very extended descriptions of methods may be submitted for deposit with the American Society for Information Science National Auxiliary Publications Service (NAPS) c/o Microfiche Publications, P.O. Box 3513, Grand Central Station, New York, NY 10017. A text reference or footnote stating that the full description is available from NAPS permits interested readers to obtain the information, and does not occupy an inordinate amount of Journal space. There is a nominal charge to authors for this procedure; those who request the complete information from NAPS pay a small fee.
- 6. Results. This section ordinarily contains the experimental data to be presented but not extended discussions of their significance. Results should usually be presented in graphic or tabular form, rather than discursively. Graphic presentation of data is often preferred but there should not be duplication in text, tables and figures. Sufficient data must be given to allow readers to judge the variability and reliability of the results. Statistical tests used and the data analyzed should be explained so that the findings can be interpreted and evaluated.
- 7. Discussion. This section should present conclusions to be drawn from the results. Speculative discussion is not discouraged, but the speculation should be based on the data presented and identified as such. The discussion should be as concise as possible, within the limits of the ideas which the authors wish to propose and adequate discussion of related work by others.
- 8. Acknowledgments. These may be included at the end of the text of the manuscript, but should have a separate heading. Gifts and assistance can be acknowledged here but financial support should appear in a footnote to the title.
- 9. References. In text citations, give the author's name and the year of publication (e.g., McCarthy, 1952; Ruth and Gehrig, 1929). With more than two authors, the text citation should contain the name of the first author, followed by "et al.," and the date (e.g., Kennedy et al., 1960). In the list of references, entries should be arranged alphabetically by author, and not numbered. All authors' names should be given. If reference is made to more than one publication by the same authors in the same year, suffixes (a, b, c, etc.) should be added to the year in the text citation and in the list of references.

The list of references should contain, in sequence, the following information; authors' names and initials, title of the cited article, title of the journal in which the article appeared (abbreviated; see below), volume number of the journal, inclusive pagination and year of publication. Abbreviations for journals should conform to the Biosis List of Serials (BioSciences Information Services of Biological Abstracts, Philadelphia, PA 19103). Citations of personal communications or of unpublished observations should be given in parentheses at the appropriate place in the text not in the list of references. A paper may not be cited as "in press" unless it has been accepted for publication. In such cases the name of the journal must be given.

Except in extraordinary circumstances, no more than four references should be cited in support of any given point. The authors are responsible for the accuracy of such citations and are urged to take the utmost care in proofreading citations and reference list.

10. Footnotes. All footnotes to the title, authors' names or text should be indicated by arabic numeral superscripts, not by letters or other symbols. The footnotes should be typed in sequence on a separate page not a text page. Footnotes to tables are discussed under Tables, below.

#### The Journal of Pharmacology and Experimental Therapeutics

- 11. Tables. Each table should be on a separate page. Tables should be numbered consecutively with arabic numerals, and should be designed to fit the column or page size of the Journal. A brief descriptive title should be given at the top of each table. The table number should be given in capital letters, the title in boldface upper and lower case letters (e.g., TABLE 3. Uptake of labeled drug by rat liver slices). The footnotes to the tables should be referenced by italicized lower case superscript letters (a, b, c, etc.) and should appear beneath the table involved, not on a separate page of the manuscript. Extensive tabular material not absolutely essential to the manuscript will be accepted for deposit with the ASIS/NAPS (see "Methods," above). In such instances a footnote in the published paper will refer the interested readers to NAPS from which copies may be obtained. Note Statistics below for expressions of probability.
- 12. Legends for figures. These should be numbered consecutively in arabic numerals and should appear on a separate page of the manuscript. Legends should explain the figures in sufficient detail so that frequent referral to the text is unnecessary, but efforts should be made to avoid unnecessary length. Abbreviations in the legends should conform to those in the text (see "Abbreviations," below).
- 13. Figures. Illustrations should be submitted as unmounted glossy photographic prints, no larger than 8 by 10 inches. The authors' name and address and the number of the figure should be placed on the back of each print. A typed label is usually most satisfactory. Ball type pen should not be used. Note Statistics below for expression of probability. Illustrations must be clear enough to permit reproduction without retouching and legibility after reduction to single-column size (approximately 3½ inches in width). Uniform symbolism should be used for all illustrations in a manuscript. Symbols, numbers and letters in the illustrations must be at least 1.5 mm in height after reduction to single column size. The title of each figure should appear in the legend rather than on the figure itself. Photomicrographs and electron micrographs should be labeled with a magnification calibration in micro or Angstrom units. A statement of the magnification should appear in the figure legend.
- 14. Index Terms. A list of index terms useful in constructing the annual index should be included as the last page of the manuscript.

#### Statistics.

Wherever possible statistical probability (P) in tables, figures, and figure legends should be expressed as \*P < .05, \*\*P < .01 and \*\*\*P < .001. For second comparisons the symbols † may be used similarly. Authors are urged to avoid unnecessary complexity and to be consistent within the manuscript. In the event of multiple comparisons within a table, footnotes, a, b, c, etc. should be used.

#### Abbreviations

Magnitudes of variables reported should be expressed in numerals. Most abbreviations are used without punctuation, with no distinction between singular and plural forms (e.g., 1 mg, 25 mg; 1 sec, 25 sec). The usual prefixes are to be used for multiples or submultiples of the basic units (e.g., kg, g, mg,  $\mu$ g, ng, pg). The following abbreviations, or their properly prefixed multiples or submultiples, may be used without definition in the text, tables and figures:

#### Units of mass

gram	g
mole	mol
equivalent	Eq
microatom	μat
Units of concentration	
molar (moles/liter)	M
normal (Eq/liter)	N
percent	%

V	
Α	
Hz	
Ci	
cpm	
dpm	
r	
m	
μ	
A	
1	
hr or h	
min or m	
sec or s	
$K_d$	
K.	
$\mathbf{K_i}$	
, К <sub>ш</sub>	
V <sub>max</sub>	
$^{\circ}\mathrm{C}$	
g	
$LD_{50}$ , $ED_{50}$ , etc.	
d-, l-, dl-	

Whenever an abbreviation other than those above is to be used in a manuscript, it is to be defined in the text or in a footnote thereto, the first time it is used. Abbreviations for commonly used substances should be those recommended by the Journal of Biological Chemistry. Abbreviations for drugs may be used if properly defined on first use and if the chemical or generic name of the drug is given when the abbreviation is first used. Abbreviations may be used in the running title but not in the full title of the manuscript.

i.v., i.p., s.c., i.m.

S.D.

routes of drug administration

standard deviation

standard error

#### Drugs

Generic names should be used in text, tables and figures. Trade names may be mentioned in parentheses in the first text reference to the drug but should not appear in titles, figures or tables. When a trade name is used, it should be capitalized; generic or chemical names are not capitalized. The chemical nature of new drugs must be given when it is known. The form of drug used in calculations of doses (e.g., base or salt) should be indicated. When several drugs are used, it may save space to include a separate paragraph in "Methods," or a separate table or footnote, listing the relevant information about all drugs employed.

#### Page Charges

Authors are assessed page charges at the rate of \$30 per printed page. With the page proof, authors will receive a request for information concerning such charges. These charges will be assessed only if they involve no personal expense to the authors. Request for waiver should be addressed to the ASPET Executive Officer at the time billing is received.

The cost of a limited number of illustrations will be borne by the Journal: the cost of excessive numbers of illustrations and of colored illustrations will have to be defrayed by the authors.

# Naunyn-Schmiedeberg's Archives of Pharmacology

#### **August**

- H. Glossmann, D. R. Ferry: Solubilization and Partial Purification of Putative Calcium Channels Labelled with [<sup>3</sup>H]-Nimodipine 279
- D. R. Ferry, A. Goll, H. Glossmann: Putative Calcium Channel Molecular Weight Determination by Target Size Analysis 292
- K. Starke, L. Späth, J. D. Lang, C. Adelung: Further Functional in vitro Comparison of Pre- and Postsynaptic Dopamine Receptors in the Rabbit Caudate Nucleus 298
- H. P. Lorez, D. Kiss, M. Da Prada,
  G. Haeusler: Effects of Clonidine on the
  Rate of Noradrenaline Turnover in Discrete Areas
  of the Rat Central Nervous System 307
- M. Strolin Benedetti, T. Boucher, C. J. Fowler: The Deamination of Noradrenaline and 5-Hydroxytryptamine by Rat Brain and Heart Monoamine Oxidase and Their Inhibition by Cimoxatone, Toloxatone, and MD 770222 315
- S. A. Doggrell, J. B. Waldron: The Effects of Iprindole on Noradrenergic Transmission in the Rat Anococcygeus Muscle 321
- H.-J. Schümann, I. Lues: Postjunctional α-Adrenoceptors in the Isolated Saphenous Vein of the Rabbit. Characterization and Influence of Angiotensin 328

#### Volume 323 Number 4 1983

Last issue of this volume

- J. L. Morris: Effects of Renal Nerve Stimulation on Vascular Resistance in the Toad Kidney 335
- A. Saria, J. M. Lundberg: Capsaicin
  Pretreatment Inhibits Heat-Induced Oedema in the
  Rat Skin 341
- H. Brasch: Lack of Direct Antiarrhythmic Electrophysiological Effects of Salicylate on Isolated Guinea-Pig Myocardium 343
- P. D. Verdouw, B. H. R. Wolffenbuttel, M. G. Scheffer: Cardiovascular Actions of the Calmodulin Inhibitor Felodipine 350
- R. J. Bridges, W. Rummel, B. Simon:
  Forskolin Induced Chloride Secretion Across the
  Isolated Mucosa of Rat Colon Descendens 355

Short Communications

K. Laustiola, P. Vuorinen,
M. Karp, H. Vapaatalo, T. Matsä-Ketelä:
8-Bromo Cyclic GMP Inhibits NADH and Lactate
Accumulation in Hypoxic Rat Atria
361

Erratum to Vol 322: 228 - 236

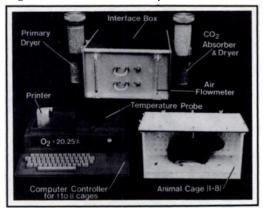
Indexed in Current Contents



#### **Springer International**

### O<sub>2</sub>-consumption CO<sub>2</sub>-production Respiration Rate

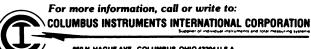
Simultaneously measured in 1 to 8 animal cages



#### **FEATURES**

One controller for 1 to 8 animal cages
 Continuous measurement of O2, CO2 and Respiration Rate over a 24 hour period in ml/kg of body weight/hour in STP units.
 Printer prints results every four (4) minutes for each of 1 to 8 animals as well as oxygen percent level in each animal cage
 System adaptable to small or large animals
 Continuous airflow through system with oxygen level measurements at the output and input
 High accuracy, >98% of full measuring range
 g. typical error ±30 ml oxygen/kg/hour in 3000 ml oxygen/kg/hour range
 User adjustable alarm warns user of possible hypoxia
 Reuseable absorbants
 Auto reference assures high accuracy, system periodically measures ambient air and corrects itself
 Optional RS-232 interface for communication with other computers
 Insensitive to temperature variations in the animal cage.

Columbus Instruments also supplies monitors for: Animal Activity, Cardiac Output, Drinking an Feeding, Respiration Rate and Startle Response.

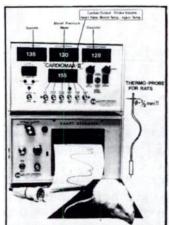


950 N. HAGUE AVE., COLUMBUS, OHIO 43204 U.S.A. PHONE: (814) 488-6176 TELEX: 246514

## RATS!!! CARDIAC OUTPUT BY THERMODILUTION

"CARDIOMAX-II-R" is the only computer which can measure cardiac output of rats (also guinea pigs, rabbits, dogs, chickens, horses and humans). For rats, it uses unique. Columbus. Instruments thermodilution microprobes 1.3 mm in size! It also measures systolic, diastolic and mean blood pressures and heart rate up to 1000 beats per minute. Stroke volume is also automatically computed.

#### Why Measure Cardiac Output of Rats?



Development of salt sensitive and salt resistive strains of rats provided inexpensive models for studying hypertension. Dynamics of rat circulators system is similar to dogs or humans. Studies on rats cost only a fraction of studies using dogs.

#### Automatic Measurements Without Supervision

All parameters (cardiac output, stroke volume, three blood pressures, blood temperature, heart rate, time of day) can automatically be measured periodically and printed when using "Cardiomax-II-R" with Columbus Instruments Automatic Injector and Printer.



## for prompt subscription service...

attach label here

Please use this coupon and attach a recent label in the space provided when writing to us about:

- change of address
- renewal
- questions regarding your subscription

Please use the space below to indicate your new address.

Name of Journal	 	
Name		
Address		
City/State/Zip		

#### THE WILLIAMS & WILKINS COMPANY

428 East Preston Street/Baltimore, Maryland 21202

#### Notice to Prospective Authors Wishing to Submit Manuscripts to

#### JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

The expenses associated with the review of manuscripts submitted to those 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. In order to continue to offer authors the opportunity to publish their original research in our critically reviewed, well-edited, and widely respected journals, it has become necessary for ASPET to follow the example of several other scientific societies which have instituted a uniform manuscript handling fee for each of its journals that publishes original research reports. Therefore, all manuscripts received in the editorial office on or after July 1, 1983, must be accompanied by a check of \$30.00 (in U.S. funds 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 appropriate We regret the necessity of instituting a manuscript Editor's office. handling fee. The Board of Publications Trustees has concluded, however, that this charge represents the fairest and most appropriate manner to defray the costs related to the review of submitted manuscripts.