

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

# DRUG METABOLISM AND DISPOSITION

The Biological Fate of Chemicals

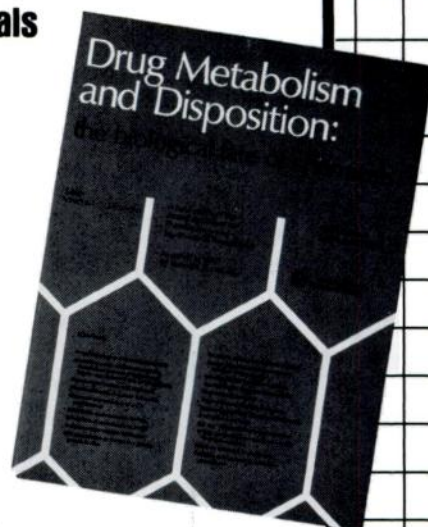
Editor: Vincent G. Zannoni, PhD, University of Michigan,  
Ann Arbor, Michigan

**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 preser-  
vatives. All papers are refereed 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: \$75/yr    Institutions: \$120/yr  
(Please add \$20.00 outside the U.S.; in Canada, also add 7% GST.)  
 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, 1991.

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.

**Williams & Wilkins**

P.O. Box 23291  
Baltimore, Maryland 21203-9990

Broadway House  
2-6 Fulham Broadway  
London SW6 1AA England

DMD 52767

J1002S01



## NOTICE TO CONTRIBUTORS

Complete instructions for the preparation of manuscripts appear in the first issue of each volume, or copies may be obtained from the editor. All manuscripts and correspondence concerning them should be sent to the editor:

**Dr. Eva King Killam  
Department of Pharmacology  
School of Medicine  
University of California  
Davis, California 95616  
(916) 752-7701**

---

## INFORMATION TO SUBSCRIBERS

THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS is issued monthly. Four volumes are published each year. Each volume contains three numbers.

*Correspondence concerning business matters* should be addressed to Williams & Wilkins, 428 East Preston St., Baltimore, MD 21202-3993 U.S.A.

*Annual Subscription Rates*—U. S. A. AND POSSESSIONS: personal, \$170.00; institutional, \$285.00; single copy, \$18.00. FOREIGN: personal, \$235.00; institutional, \$350.00; single copy, \$22.00. (Prices subject to change.) Institutional (multiple reader) rate applies to libraries, schools, hospitals, clinics, group practices, and federal, commercial, and private institutions and organizations. Foreign subscribers who wish to have issues sent by airmail may inquire of the publisher for the additional cost. The GST Tax Number for Canadian subscribers is 123394371.

*Change of address:* Publisher must be notified 60 days in advance. Journals undeliverable because of incorrect address will be destroyed. Duplicates can be obtained (if available) from the publisher at the regular price of single issues.

*New subscriptions and renewals* are entered to begin with the January or July issue.

To avoid a break in your series, subscriptions should be renewed promptly. The publisher cannot guarantee to supply back issues on belated renewals.

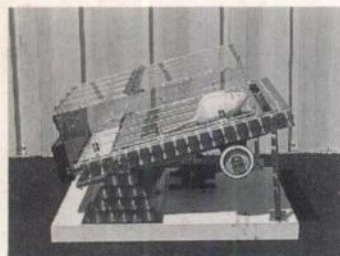
*Reprints* of individual articles are available *only* from authors.

*Microfilm.* For availability, inquire of Williams & Wilkins.

**WILLIAMS & WILKINS  
BALTIMORE, MD 21202-3993 U.S.A.**

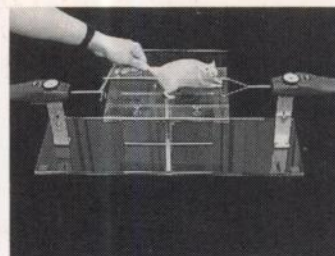
# LAB ANIMAL RESEARCH EQUIPMENT

## INEXPENSIVE EXERCISER



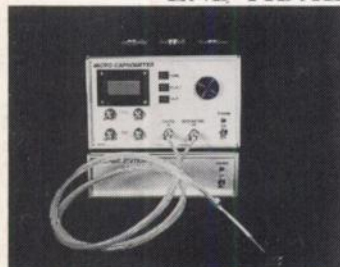
- \* For rats and mice -- 4-lane exerciser.
- \* Electronically controlled speed.
- \* Electric stimulation grids.

## GRIP STRENGTH METER for rats and mice



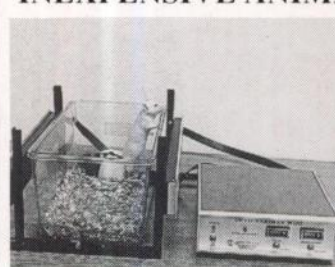
- \* Objectively measures animal deficiency in strength.

## END TIDAL CO<sub>2</sub> METER



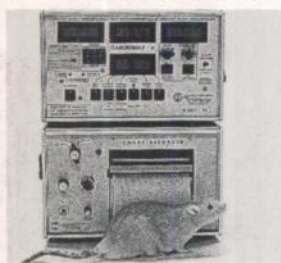
- \* Can be used for Rats
- \* Extremely small air sample flow -- 5ml/min.
- \* Analog output to most recorders.
- \* Digital display N<sub>2</sub>O measurements.

## INEXPENSIVE ANIMAL ACTIVITY METERS



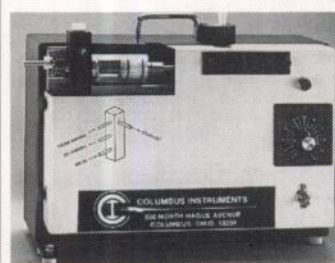
- \* "Mini" activity meter uses standard plastic cages.
- \* Can be used with rats or mice.
- \* 15 Infrared sensors.
- \* Separates ambulatory from total activity.
- \* Multi-cage system available w/ IBM-PC interface.

## CARDIAC OUTPUT FOR RATS



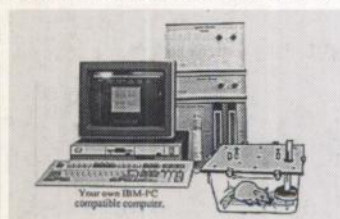
- \* Thermodilution method using 1/3 mm temp. microprobes.
- \* Can be interfaced to an IBM-PC.
- \* Measures: CO, S.V, BP, Mean Transit Time, Ejection Fraction and much more.

## VENTILATORS



- \* Mechanical (piston) positive pressure ventilators for rodents and larger animals.

## ECONOMICAL O<sub>2</sub>/CO<sub>2</sub> METABOLIC SYSTEM



Your own IBM-PC compatible computer.

- \* O<sub>2</sub> Consumption/CO<sub>2</sub> production computer (IBM-PC).
- \* Open-circuit indirect calorimeter.
- \* Completely computerized.
- \* Single channel.
- \* Also available-multi-channel

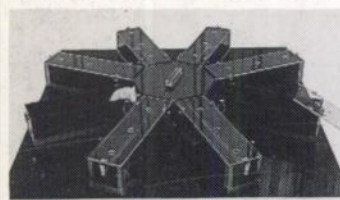
## 256 POINT THERMOMETER



FDA registered for human use

- \* Interface to IBM-PC for 1 to 256 thermocouples.
- \* Variety of temp. probes (rectal, skin, implantable).
- \* Software provides graphics and real-time plotting.
- \* Also special software for Pyrogenic Activity studies.

## MAZES -- "FIGURE 8" AND "RADIAL ARM"



- \* Computerized system with universal maze software (for IBM-PC) monitors interruption of 128 IR sensors.
- \* Data LOTUS 1-2-3 compatible.

## VIDEO TRACKERS FOR WATER MAZES



- \* Measures activity, distance traveled, pattern of movement, & rotations of multiple animals w/ 1 TV camera.
- \* Vertical activity (3-D) measurements w/ 2 cameras.
- \* Ideal for water maze, human and animal gait analysis.

For our complete catalog please contact: **Columbus Instruments International Corp.**

P.O. Box 44049 Columbus, Ohio 43204 USA

PH: (614) 488-6176 FAX: (614) 276-0529 TLX: 246514 Toll Free: 1-800-669-5011