EPIDEMIOLOGY OF MENTAL DISORDER

AAAS Symposium Volume No. 60

Edited by Benjamin Pasamanick

A symposium organized by the American Psychiatric Association to commemorate the centennial of the birth of Emil Kraepelin; cosponsored by the American Public Health Association.

. . . pioneering interdisciplinary studies by investigators from biostatistics, genetics, obstetrics, pediatrics, psychiatry, psychology, public health and sociology.

December 1959, 306 pp., \$6.50 AAAS members' cash orders, \$5.75

English Agents: Bailey Bros. & Swinfen, Ltd. West Central Street London W.C.1, England

American Association for the Advancement of Science

1515 Massachusetts Ave., NW Washington 5, D.C.



Quantity discounts start at 2 — only \$65.12 for 11 — 24 units

HMITHO

Н	UNITRON		
	INSTRUMENT DIVISION of UNITED SCIENTIFIC CO.		
	204-206 MILK STREET . BOSTON 9, MASS.		
ī	Please rush UNITRON's Microscope Catalog 4C-2		
	1 loads 1431 Old 1 WOLL & MICLOSCOPE CALEIOS 4C-Z		
į	Name		
	Name		
	NameCompany		

9-12. American Medical Women's Assoc., Miami Beach, Fla. (Mrs. L. T. Majally, 1790 Broadway, New York 19)

9-12. American Rheumatism Assoc., annual, Hollywood-by-the-Sea, Fla. (F. E. Demartini, Presbyterian Hospital, 622 W. 168 St., New York 32)

9-12. American Therapeutic Soc., Miami Beach, Fla. (O. B. Hunter, Jr., 915 19 St., NW, Washington 6)

10-12. American College of Angiology, Miami Beach, Fla. (A. Halpern, 11 Hampton Court, Great Neck, N.Y.)

10-12. American Electroencephalographic Soc., Boston, Mass. (G. A. Ulett, 1420 Gratten St., St. Louis 4, Mo.) 10-12. Society for Biological Psychiatry,

10-12. Society for Biological Psychiatry, Miami Beach, Fla. (G. N. Thompson, 2010 Wilshire Blvd., Los Angeles 57, Calif.)

11. American Acad. of Tuberculosis Physicians, Miami Beach, Fla. (G. P. Bailey, P.O. Box 7011, Denver 6, Colo.)

11-12. American Diabetes Assoc., Miami Beach, Fla. (J. R. Connelly, 1 E. 45 St., New York 17)

11-16. American Soc. of X-ray Technicians, Cincinnati, Ohio. (G. J. Eilert, 16 Fourteenth St., Fond du Lac, Wis.)

12. Society for Vascular Surgery, Miami Beach, Fla. (G. H. Yeager, 314 Medical Arts Bldg., Baltimore 1, Md.)

12-15. American Nuclear Soc., 6th annual, Chicago, Ill. (O. Du Temple, ANS, c/o John Crerar Library, 86 E. Randolph St., Chicago 1)

12-15. American Soc. of Agricultural Engineers, Columbus, Ohio. (J. L. Butt, P.O. Box 229, St. Joseph, Mich.)

12-16. Cancer Research, 4th Canadian conf., Honey Harbour Ontario, Canada. (R. L. Noble, Collip Research Laboratory, Univ. of Western Ontario, London, Ontario, Canada)

12-17. Association for Research in Ophthalmology, Miami Beach, Fla. (L. V. Johnson, 10515 Carnegie Ave., Cleveland)

13-14. Technical Writing Improvement Soc., 5th Southern Calif. Industrial Writing Inst., Los Angeles, Calif. (J. L. Kent, TWIS, P.O. Box 5453, Pasadena, Calif.)

13-15. American Neurological Assoc., Boston, Mass. (M. D. Yohr, 710 W. 168 St., New York 32)

13-15. American Soc. of Heating, Refrigerating and Air-Conditioning Engineers, 67th annual, Vancouver, B.C. (E. R. Searles, ASHRAE Journal, 234 Fifth Ave., New York 1)

13-15. Chemical Inst. of Canada, 43rd conf., Ottawa, Ontario. (CIC, 48 Rideau St., Ottawa 2, Ontario)

13-15. Herpetologists League, Eugene, Ore. (A. M. Woodbury, 248 University St., Univ. of Utah, Salt Lake City 2)

13-15. International Powder Metallurgy Conf., New York, N.Y. (K. H. Roll, Metal Powder Industries Federation, 60 E. 42 St., New York 17)

13-15. Microscopy, natl. symp., Chicago, Ill. (Walter C. McCrone Associates, 501 E. 32 St., Chicago 16)

13-15. Society for Investigative Dermatology, 21st annual, Miami Beach, Fla. (H. Beerman, SID, 255 S. 17 St., Philadelphia)

13-17. American Medical Assoc., Miami Beach, Fla. (F. J. L. Blasingame, 535 N. Dearborn St., Chicago 10, Ill.)

(See issue of 22 April for comprehensive list)

New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.

- DISPLACEMENT TRANSDUCER uses a lift bar actuated by the motion being measured. As the lift bar rises in response to the mechanical input, successive contact pairs close and sequentially short circuit an increasing fraction of the total resistance of the device. Fullscale displacement is 1/8 in. A dither coil serves to smooth the transfer characteristics and to reduce the actuation force to 10 gm. A 20-contact model will dissipate up to 200 watts and directly control circuits in the low kilowatt range. (Electric Regulator Corp., Dept. Sci499, Pearl St., Norwalk, Conn.)
- PHASE DETECTOR for the frequency range 15 to 400 Mcy/sec claims accuracy of ± 0.05 deg or ± 1 percent of dial reading. The smallest phase angle that can be read is less than $10^{-13} \times 360 \times$ frequency (in cy/sec). The minimum input signal depends on the sensitivity of the receiver used and is approximately 20 μ v for a receiver of 5 μ v sensitivity. A 2-volt minimum signal is recommended by the manufacturer if the instrument's panel meter is used as the indicator. (Ad-Yu Electronics, Inc., Dept. Sci501, 249-259 Terhune Ave., Passaic, N.J.)
- PROTECTIVE SUIT SYSTEM isolates a worker from toxic or corrosive elements in the environment through complete enclosure in sealed coveralls. The air volume within the suit is recirculated and processed to remove heat, water vapor, and carbon dioxide, while oxygen is added at the rate of consumption. The air-reconditioning device, completely self-contained and worn under the coveralls, weighs less than 15 lbs. It is suitable for 1 hour of active use and is easily renewed. (Isolair, Environment Incorporated, Dept. Sci503, Box 51, Yellow Springs, Ohio.)
- DISTANCE MEASURING INSTRUMENT of the capacitance-probe type covers the range to 0.5 in. in four ranges with four probes. Accuracy is said to be ±2 percent of full-scale deflection, discrimination better than ±0.5 percent. The instrument is direct-reading, with display provided by a moving-coil meter. Standard probes designed for measurment of flat conducting surfaces have plane circular electrodes with guard-ring construction. Special probes for curved surfaces can be supplied. An output signal for operation of recorders or other auxiliary equipment furnishes

A new publishing firm
invites
the submission
of manuscripts
by professionals
of standing in their fields.

Manuscripts accepted
in May and June
will be prepared for publication
before Christmas, 1960.

PAUL MARTINEAU, Publisher
Box 421 Ithaca, N.Y.





Introduced recently, Waring's new Explosion-Proof Blendor Base already has been recognized by safety committees throughout the country as the answer to safely blending materials at high speed wherever hazardous atmospheres exist. Exposed motor arcing is completely eliminated. Even the most critical blending operations may now be performed with safety in areas that are permeated with flammable gases or vapors likely to produce explosive or ignitible mixtures. No wonder this exclusive Waring Explosion-Proof Blendor Base has had wide, enthusiastic acceptance in the chemical, petroleum and other industries!

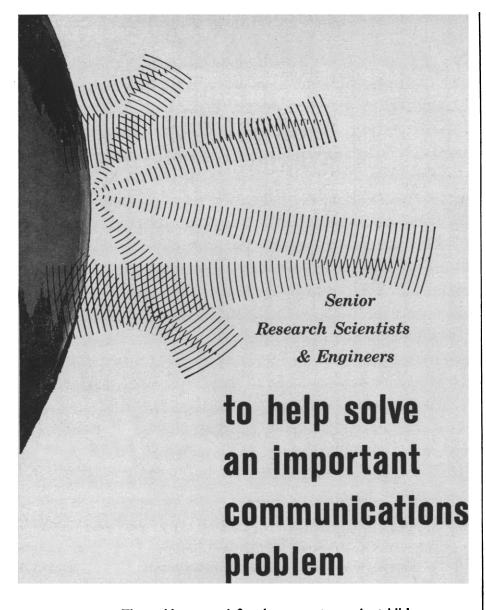
SPECIFICATIONS: Lifetime-lubricated motor is wired for 2 speeds; ½ H.P.; 120 volts; AC-DC; 25-60 cycles; 4.2 amps. Stainless steel container (shown) or Pyrex container, both with 37½-ounce capacity, may be used. *Class I-Group D Rating*

WARING PRODUCTS CORPORATION

25 West 43rd Street, New York 36, N. Y.
A subsidiary of Dynamics Corporation of America
NAME YOUR BLENDING PROBLEM

Waring Engineers will help you solve it.

SEND FOR FREE LITERATURE		
GENTLEMEN: I want full speci Wuring Laborato	fication data on the new Explosion-Proof	
NAME	••••••	
TITLE		
COMPANY		
ADDRESS		
CITY/ZONE	STATE	



The problem...to define the parameters and establish feasibility of a long-range, ECM-proof, single or multiple path communications system capable of negligible degradation and an ultra-high degree of reliability while operating in a constantly changing environment.

The solution, at present, is difficult... all known techniques, individually or multi-plexed, would provide only marginal performance.

Research Scientists and Engineers with advanced degrees who feel they can contribute new insight, new concepts, and the application of new techniques to the establishment of this vitally important system are invited to forward their confidential inquiry to:

Dr. R. L. San Soucie

Amherst Laboratory / SYLVANIA ELECTRONIC SYSTEMS
A Division of



1146 Wehrle Drive - Williamsville 21, New York

a current of 0 to 1 ma into resistance up to 1000 ohm. Another output, for oscilloscope display, is an amplitude-modulated 50 kcy/sec signal; full-scale is 7 volts r.m.s. (Wayne Kerr Corp. Dept. Sci512, 1633 Race St., Philadelphia 3, Pa.)

- PULSE HEIGHT ANALYZER employs a stepping motor that advances the threshold setting in discrete 1-volt increments. A scaler records the counts at each setting and after the expiration of preset count or preset time a data printer records the channel number, count and elapsed time on a paper tape. Up to 100 channels may be counted. An adjustable, overriding preset time prevents excessively long time scan when the analyzer is operating on preset count. The instrument is available with or without a stabilized 2000-volt power supply. (Tracerlab/Keleket, Dept. Sci-513, 1601 Trapelo Rd., Waltham 54, Mass.)
- INSULATION TESTER automatically checks insulation leakage current, making sequential tests of up to 50 components on circuits for periods to 12 hr without requiring adjustment or other attention. Test potential may be set for any value to 50 kv. Rate of rise and duration of the test potential, up to 15 min, are adjustable. Reject-current controls are adjustable from 0.5 µa to 250 ma. The tester may be set to shut off upon locating a defect or to continue checking but dropping to zero the test potential on the unit that has failed. (Associated Research, Inc., Dept. Sci508, 3777 W. Belmont Ave., Chicago 18, Ill.)
- OPTICAL-PYROMETER CALIBRATION SET permits simultaneous calibration of two pyrometers. The set provides a wide filament-strip type lamp that can be adjusted by step and vernier rheostats to temperatures in the range 800° to 2300°C. Instrument holders and brackets are furnished to permit mounting different types of optical pyrometers. A certificate of calibration is furnished with the set. (Pyrometer Instrument Co., Dept. Sci518, Bergenfield, N.J.)
- VACUUM HOLDING TOOL is designed to pick up and handle delicate parts for inspection or positioning operations. A wide range of plastic tips is available to meet the requirements of specific operations. Associated with the tool is a device, operated by compressed air, to provide vacuum where a standard compressed-air line is available. (Air-Vac Engineering Co., Dept. Sci523, Old Stratford Rd., P.O. Box 27, Shelton, Conn.)

JOSHUA STERN

National Bureau of Standards, Washington, D.C.

Volume 11 (May 1960)

ANNUAL REVIEW OF **MEDICINE**

Virus Diseases: Some Aspects of Host and Tissue

Virus Diseases: Some Aspects of Host and 11ssue Specificity
Infectious Diseases: Bacterial
Gastrointestinal Diseases: Portal Hypertension
Gastrointestinal Diseases: Hepatic Coma
Cardiovascular Disease: Arterial Hypertension
Cardiovascular Disease: Pulmonary Hypertension
Cardiovascular Disease: Perinatal Circulation
Diseases of the Kidney: Acute Renal Failure

Diseases of the Kidney: Acute Renal Failure Surgical Diseases of the Kidney Hematology: The Megaloblastic Anemias Hematology: Control of Red Cell Production

Nutrition and Nutritional Diseases
Endocrinology: The Thyroid
Allergy and Immunology: The L.E. Cell Phenomenon

Allergy and Immunology: Delayed Hypersensitivity and Homografting

Neoplastic Diseases: Hormone-producing or Hor-

mone-dependent Tumors

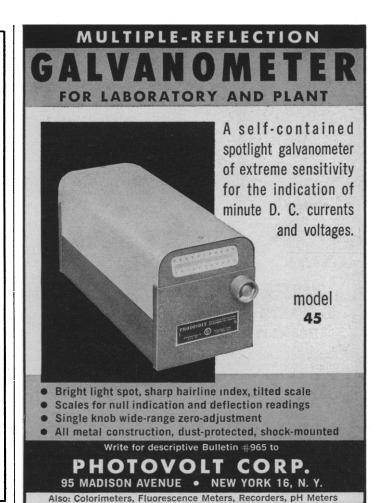
Psychiatry: Behavioral Problems in the Adolescent Special Therapeutics: Physiology of Diuretics Radiology: Reaction to Short-term Radiation in

Radiology: High Voltage Radiation Therapy Dermatology: Hormonal Control of Pigmentation Dermatology: Biochemical Changes in the Dermatitides

Pediatrics: Congenital Enzyme Defects \$7.00 postpaid (U.S.A.); \$7.50 postpaid (elsewhere)

ANNUAL REVIEWS, INC.

Grant Avenue, Palo Alto, California



PERSONNEL PLACEMENT

CLASSIFIED: Positions Wanted, 25¢ word, minimum charge \$4. Use of Box. Number counts as 10 additional words. Payment in advance is required. Positions Open, \$40 per inch or fraction thereof. No charge for box number.

DPY for classified ads must reach SCIENCE 2 weeks before date of issue (Friday of every week).

DISPLAY: Rates listed below—no charge for Box Number. Monthly invoices will be sent on a charge account basis—provided that satisfactory credit is established.

Single insertion
4 times in 1 year
7 times in 1 year
13 times in 1 year
26 times in 1 year
52 times in 1 year \$40.00 per inch 38.00 per inch 36.00 per inch 34.00 per inch 34.00 per inch 32.00 per inch

For PROOFS on display ads, copy must reach SCIENCE 4 weeks before date of issue (Friday of every week).

Replies to blind ads should be addressed as follows:

Box (give number)

Science

Science 1515 Massachusetts Ave., NW Washington 5, D.C.

POSITIONS WANTED

Biologist, Ph.D., 5 years of teaching, 5 years of research, cellular, comparative physiology, biochemistry, wishes academic position, East. Box 108, SCIENCE.

Botanist, Ph.D. Morphology-anatomy major desires college teaching position. Experienced. Box 105, SCIENCE. 5/20

Microbiologist, Ph.D. Chemistry minor; 2 years of research; 4 years of college teaching. Male; age 36. Desires teaching or research position in West. Box 109, SCIENCE.

POSITIONS WANTED

(a) Endocrine Physiology Ph.D., completing post-doctorate fellowship in enzyme biochemistry; military research in nuclear medicine and radio-biology; fellowships in muscular dystrophy and heart research; desires academic or research position. (b) Bacteriology Ph.D., botany-chemistry minor, 3 years of university teaching and research experience; available for academic appointment. S5-2 Medical Bureau, Inc., Science Division, Burneice Larson, President, 900 North Michigan Avenue, Chicago.

POSITIONS OPEN

Biostatistician Ph.D., research in child growth studies. Opportunities for varied consultation and teaching at dental school located in large medical center; modern computing facilities available. Salary from \$9000 and academic rank dependent upon qualifications. Write to Dr. Bhim Savara, Head of Department, Child Study Clinic, University of Oregon Dental School, 611 S.W. Campus Drive, Portland 1, Ore.

Campus Drive, Portland 1, Ore.

GRADUATING?
GRADUATED?
YOUNG MAN, if you are committing yourself for employment you are definitely making one of the most important decisions in your life! Avoid the pitfall of accepting a position which will not make full use of your training and talents and will thereby obscure your career potential. Use knowledge and experience. Our professional staff serve both the employee and employer to their mutual satisfaction by objectively and comparatively screening employer profiles and employee dossiers to properly place the man for the position. Send your inquiry and/or résumé to Doctor A. H. Hammond, Chairman, Liaison Commitee, NATIONAL SCIENTIFIC PERSONNEL BUREAU, INC., 1029 Vermont Avenue, NW, Washington 5, D.C.

KIII Interest and the property of the property of the profile of the profil

Histologist, Histochemist, Ph.D. or equivalent. Research institute, New York, Modern, well equipped and staffed, air-conditioned laboratory. Opportunity for training in electron microscopy. Box 107, SCIENCE. 5/13, 20

POSITIONS OPEN

(a) Biochemist for new academic unit for coagulation and cardiovascular research opening in California; teaching and research duties. (b) Epidemiologist for foreign appointment with important industrial firm. (c) Microbiologist to conduct enzyme and fermentation research on agricultural and drug products; around \$10,000 a year; Midwest. (d) Pharmaceutical Chemistry faculty appointment; East. (e) Research Scientists in Chemistry, Physiology, or Pharmacology with radioisotope background for expanding nuclear science research firm; East. (f) Zoology Assistant Professor stressing ecology and biology; teaching with research opportunities; Chicago. (g) Biochemist with Ph.D. or M.S. degree and clinical experience for administrative duties in expanding hospital affiliated with leading medical school; Midwest. (h) Assistant Research Director with production experience to coordinate, supervise, and expedite clinical program of drug firm; Midwest. (i) Physics/Mathematics Assistant or Associate Professor for teachers college; East. (j) Pharmacologist Group Leader for cardiovascular research and supervising with drug firm; Midwest. (k) Histologist, Ph.D. or M.S. degree, experienced in preparing bone and periodontal tissue for research laboratory; Pacific Coast. (Please write for details; also many other positions available through our nationwide service.) S5-2 Medical Bureau, Inc., Science Division, Burneice Larson, President, 900 North Michigan Avenue, Chicago.

Medical Technologist, blood banking background desirable. Interest in research required. Excellent opportunity to participate in blood group research. Salary open. Mail replies to R. F. Ambelang, Milwaukee Blood Center, Inc., Milwaukee, Wis.

Position available in a Gerlatric Institute to conduct and coordinate research. Applicant must have a Ph.D. degree or its equivalent. Salary commensurate with experience. Address inquiries to Institute of Gerlatrics, 167 Street and Findlay Avenue, Bronx 56, N.Y., or call Dr. Seltzer or Dr. Klein at CYpress 3-1500.

POSITIONS OPEN

ENDOCRINOLOGIST OR PHYSIOLOGIST

An expanding midwestern pharmaceutical company has an opportunity for a Ph.D. endocrinologist or physiologist with interest and experience in physiology of reproduction. Prefer 1 to 2 years postdoctoral industrial or academic experience. Position would involve basic and preclinical studies with sex hormones and related drugs.

Please send résumé to

Technical Employment Coordinator THE UPJOHN COMPANY Kalamazoo, Mich.

WARNER-LAMBERT RESEARCH INSTITUTE

MORRIS PLAINS, N. J.

Expanding research program offers opportunities for experienced

Ph.D. ORGANIC CHEMISTS -Synthetic medicinals or natural products . . .

Ph.D. BIOCHEMISTS—Immunity Enzymes and Enzyme Metabolism . . .

PHARMACISTS — Development of Oral Products . . .

Ph.D. PHARMACOLOGIST—Cardio Vascular research...

Send Resume Stating Salary Requirments to

WILLIAM J. SUMNER WARNER-LAMBERT RESEARCH INSTITUTE

Morris Plains.

(a) Pharmacologist, Ph.D., some medical courses; prefer teaching, research experience; \$10,000; midwestern pharmaceutical company. (b) Chemist, analytical or organic, for consulting firm engaged drug, protein, food evaluation, vitamin, hormone, toxicological assays; excellent equipment, facilities; midwestern university center. (c) Biochemist, Ph.D. to supervise biochemistry department and all laboratory personnel, about 30; 220-bed general hospital expanding this year; university, industrial center; Northcentral. (d) Virologist-Tissue Culturist, Ph.D. trained, experienced virus isolation, cell culture on tumor viruses; new building, newly organized eastern research group. (e) Pharmacologist, Ph.D., for animal experimentation, midwestern university medical school; to \$10,000. (Please write for analysis form. Our 64th year: Founders of the counselling service to the medical profession; serving medicine with distinction over half a century.) Science Division, Woodward Medical Bureau, Ann Woodward, Director, 185 North Wabash, Chicago.

Science Teachers, Librarians, Administrators urgently needed for positions in many states and foreign lands. Monthly non-fee placement journal since 1952 gives complete job data, salaries. Members' qualifications and vacancies listed free. 1 issue, \$1. Yearly (11 issues) membership, \$5 individual; \$10 institutional. CRUSADE, SCI., Box 99, Station G, Brooklyn 22, N.Y. eow

Virologist (IVa) Ph.D., to head public health virus laboratory engaged in diagnostic and research activities. State civil service with retirement plan, plus social security. Starting salary \$8435 to \$10,774 maximum. Write Michigan Civil Service, Recruitment and Placement, Lansing 13, Mich., for further information. 5/6, 13, 20

POSITIONS OPEN

CHEMISTS CHEMICAL ENGINEERS

To 5 years experience in the following areas: Organic synthesis, polymer chemistry, applications, research and development in the general polymer field, including thermosetting, thermoplastic and elastomeric materials.

Also, Chemical Engineers for process development, bench and pilot plant operations, organic chemicals, resins and polymers; 0-2 years industrial experience.

Box 110, SCIENCE

Head of

Physico-Neuro

Pharmacology

Midwestern pharmaceutical firm seeks qualified man to head its Central Nervous Department. Age 30-45. Ph.D. or M.D. degree. Should have 5 years' experience in field with general knowledge and interest in neuropharmacology and neuroanatomy, experimental psychology, and pharmacology. Will have supervision responsibilities and broad decisions on various programs. Salary commensurate with experience. All replies confidential. Send résumé of education and experience to:

Box 111, SCIENCE

PESTICIDES RESEARCH

Canadian Department of Agriculture requires

Two Scientists to study insect physiology and the mode of action of fungicides.

Salary \$6360-\$7320

For details, write to

CIVIL SERVICE COMMISSION, OTTAWA

Ask for Circular 60-550.

Research and Teaching Assistantships available for graduate students. Programs in metabolism, mechanism of biological reactions, muscle physiology, and enzyme chemistry. Stipends \$3000 per year. Applications invited for immediate consideration or for next academic year. Personal interviews arranged for promising candidates. Write to Chairman, Department of Pharmacology, St. Louis University School of Medicine, St. Louis 4, Mo. 5/13

FELLOWSHIPS

Predoctoral and Postdoctoral Fellowships in Medical Physics. Opportunities to do postgraduate work in the basic medical sciences and in their application to clinical problems. Emphasis is on the fields of radiation biology, radiation physics, and the clinical use of radioisotopes. Study programs leading to the M.S. and Ph.D. degrees and postdoctoral research supported by fellowships. Stipends vary with training and dependents. Write to Chairman, Department of Radiology, Medical Center, University of California, Los Angeles 24, Calif.

The Market Place

BOOKS AND MAGAZINES

Your sets and files of scientific journals

are needed by our library and institutional customers. Please send us lists and description of periodical files you are willing to sell at high market prices. Write Dept. A3S, CANNER'S, Inc.

Boston 20, Massachusetts

PROFESSIONAL SERVICES



LABORATORY SERVICES

for the **FOOD** and DRUG INDUSTRIES Drug Evaluation, Food Additive Studies Chemical and Biological Assays, Clinical Studies, Research

LAWALL & HARRISSON Div. S. 1921 Walnut St., Philadelphia 3, Pa. LO 3-4322

SUPPLIES AND EQUIPMENT

YOU NEED THIS FREE **CATALOG FOR YOUR FILES**

Serums, antiserums and bloods of all kinds for technicians and tissue culture laboratories. No salesman will call.

COLORADO SERUM CO. 4950 York St. • MAin 3-5373 • Denver 16, Colo.

HYPOPHYSECTOMIZED RATS

Shipped to all points via Air Express For further information write HORMONE ASSAY LABORATORIES, Inc.

8159 South Spaulding Ave., Chicago 29, III.

The Most Accurate Pipet

MISCO Micro pipets make measurements reproductible to 0.1% routinely. Most complete line anywhere. Write for catalog.

MICROCHEMICAL SPECIALTIES CO. 1825 Eastshore Highway, Berkeley 10, California

> 1919 - 1960 LaMotte Chemical Chestertown, Maryland, U.S.A. Specialists in

Colorimetric Techniques

Reagents-Standards-Comparators Send for Illustrated Controls Handbook Dept. H

"From the hand of the veterinarian

200 albino

to research"® rats

CHARLES RIVER CD (Caesarean derived) CHARLES RIVER SD (Sprague-Dawley descendants) CHARLES RIVER W (Wistar descendants)

HYPOPHYSECTOMIZED RATS

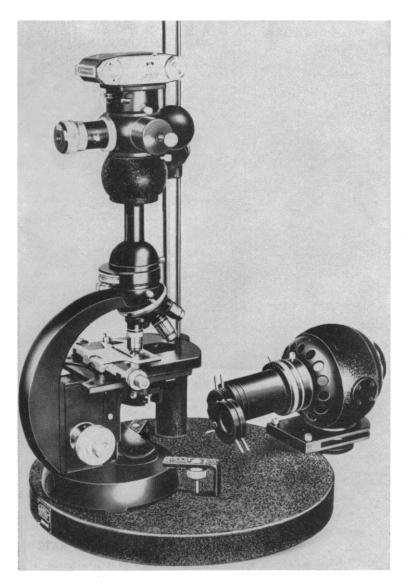
- Only Charles River CD animals used
- Rigidly controlled environment (same bldg.) birth to surgery.
- High speed surgery by graduate biologists.
- 10 years experience animal surgery.
- Overnight air service from Boston

THE CHARLES RIVER BREEDING LABS

Dept. B, 1093 Beacon Street, Brookline 46, Mass. Henry L. Foster, D.V.M., President



Large Equipment for Fluorescence Microscopy



The Carl Zeiss Large Fluorescence Equipment fulfills to the highest degree the requirements of modern fluorescence microscopy in brightfield as well as darkfield.

Exciter filter combinations make it possible to select the most suitable ultraviolet or blue-violet range of the spectrum emitted by a high intensity mercury vapor burner. In addition, a specially designed filter tube, with rotatable disc containing barrier filters, not only protects the human eye but allows quick selection of filter combinations to obtain highest contrast of the specimens under examination. The purity of the produced fluorescence is not only of the optimum but of such high intensity that photomicrographs can be made in color or blackand-white.

Another outstanding advantage is the fact that every existing Carl Zeiss objective can be employed—not only Achromats but also highly corrected objectives such as Apochromats, Neofluars, and Planachromats. This makes it possible to observe true colors produced by fluorescence and at the same time makes the purchase of objectives suitable for fluorescence unnecessary.

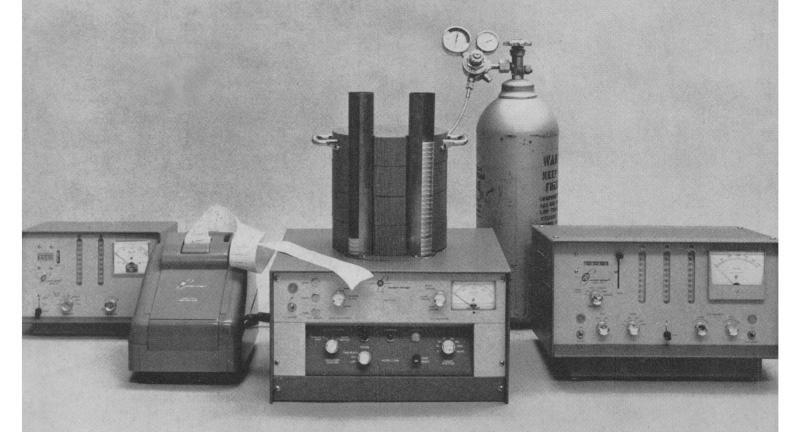
Write for free, detailed literature



Announcing a major breakthrough in automatic counting of solid radioactive samples.

Now samples containing minute, previously unmeasurable amounts of carbon-14, phosphorus-32, strontium-90, etc., can be counted automatically with high accuracy. A revolutionary new "guarded" Gas Flow Detector in the new Nuclear-Chicago Automatic Sample Changer has a net background of only 2 counts per minute.

The new system makes possible, for the first time, automatic analysis of beta samples having counting rates as low as 2-3 counts per minute. Measurement time is greatly reduced in routine sample counting, while the amount of radioactive reagent required in tracer experiments can be cut substantially.



For full information on the new Low Background Automatic Sample Changer, write for Bulletin C-115.

