Nelson and John H. Rust; "Tumor transplantation" by Kanematsu Sugiura; "Parabiosis" by Charles E. Hall; "Organ trans-plantation" by Roy Yorke Calne; "The care and use of hibernating mammals" by Raymond J. Hock; "High-altitude studies" by Paola S. Timiras; "Care and growth of animals during chronic centrifugation" by Charles C. Wunder; "Controlled exercise" by James E. Corbin; "Methods of animal infection with bacteria, fungi, and viruses" by Robert J. Byrne; and "Electronic monitoring of physiological phenomena in experimental animals" by Juan B. Calatayud, Patrick A. Gorman, and Cesar A. Caceres.

A Monograph on Chlordane: Toxicological and Pharmacological Properties. L. Ingle. Velsicol Chemical Corp., Chicago, 1965. 88 pp.

Nuclear Hematology. E. Szirmai, Ed. Academic Press, New York, 1965. 605 pp. Illus. \$22.50. Seventeen papers

The Origin of Cultivated Plants. Franz Schwanitz. Translated by Gerd von Wahlert. Harvard Univ. Press, Cambridge, Mass., 1966. 183 pp. Illus. \$4.75.

Physical Instrumentation in Medicine and Biology. D. J. Dewhurst. Pergamon,

New York, 1966. 217 pp. Illus. \$9.50. Physiological Pharmacology: A Comprehensive Treatise. vol. 2, pt. B, The Nervous System: Central Nervous System Drugs. Walter S. Root and Frederick G. Hofmann, Eds. Academic Press, New York, 1965. 502 pp. Illus. \$16.50. Contributors are K. Bucher, P. Holtz, H. McLennan, J. Gordon Millichap, Albert M. Potts, Cedric M. Smith, S. C. Wang, and E. Westermann.

The Plankton of the Sea. R. S. Wimpenny. Elsevier, New York, 1966. 426 pp. Illus. \$16.

Primary Hepatoma. Walter J. Burdette, Ed. Univ. of Utah Press, Salt Lake City, 1965. 160 pp. Illus. Eleven papers on the following topics: Cancer of the Liver in Man (2 papers); Fine Structure of Hepatic Cancer (2 papers): and Etiologic Considerations (7 papers).

Principles of Electronics in Medical Research. D. W. Hill. Butterworth, Washington, D.C., 1965. 302 pp. Illus. \$13.

The Use of Diagnostic Ultrasound in Brain Disorders. Charles C. Grossman. Thomas, Springfield, Ill., 1966. 169 pp. Illus. \$9.

Viewpoints in Biology. vol. 4. J. D. Carthy and C. L. Duddington, Eds. Butterworth, Washington, D.C., 1965. 266 pp. Illus. \$14.50. Seven papers: "Marsupials and the evolution of viviparity" by G. B. Sharman; "Problems of nuclear division, with special reference to the algae" by M. B. E. Godward; "The anatomy of reaction tissues in plants" by D. J. B. White; "The chemical senses and changing viewpoints in sensory physiology" by E. S. Hodgson; "Drosophila and the evolution of behaviour" by Aubrey Manning; "Plant protoplasts" by E. C. Cocking; and "Form and function in the interpretation of feeding in lumbricid worms" by Don R. Arthur.

Vision: Biophysics and Biochemistry of the Retinal Photoreceptors. Jerome J. Wolken. Thomas, Springfield, Ill., 1966. 209 pp. Illus. \$9. American Lectures in Living Chemistry, edited by I. Newton Kugelmass.

MATTER-OF-FACT REASONS WHY... BAUSCH & LOMB V.O.M. RECORDERS ASSURE YOU OUTSTANDING PERFORMANCE 1. Directly measure and record d-c voltage, current and resistance 2. Five built-in variable chart speeds 3. Built-in event marker 4. 17 different input ranges 5. Zener diode reference supply 6. High off-balance input impedance

- 7. Can be used in three positions flat on bench, at a 30° tilt or wall mounted
- 8. Photoelectric modulator
- 9. Full scale zero set-anywhere on chart span
- 10. Floating input with separate chassis ground
- 11. Built-in 100' take-up reel
- 12. Modular assembly and plug-in

connections for rapid access service and maintenance

- 13. Serve as accurate vacuum tube voltmeters in measure position
- 14. Lightweight and portable
- 15. All calibration adjustments made without disassembling units
- 16. Zener diode d-c supply for ohms scale
- 17. Adjustable damping
- 18. Efficient pen design
- 19. Low cost, high quality chart paper
- 20. Backed by years of experience in engineering sophisticated electronic circuitry
- 21. An entire division is devoted exclusively to the development and production of electronic products

Bausch & Lomb V.O.M. Recorders are available in a variety of models with different full scale sensitivity. We have a wide range of accessories that make our recorders equal to just about any task required. For your special needs, we have the capability of designing customized recorders ... modified to handle whatever applications you have in mind. Let us hear about your recorder requirements. Write for Catalog 37-2068. Better yet, ask for a personal demonstration. Bausch & Lomb, 20728 Bausch Street, Rochester, New York 14602.



ELECTRONICS DIVISION





- 1 Heats and Cools—almost double the range of the average visibility bath.
- 2 Accuracy constant temperature at any level from -10°C to +65°C ±.01°C — ideal where precise temperature control is required.
- 3 Large Capacity—coils fit snug against the bottom, the entire volume of the jar is usable. Glass jar permits fast observation.
- 4 Compact only 201/2" wide 271/2" high. Saves space. Fits on any lab table or desk.
- 5 Self-contained heating controls, cooling compressor, all parts are housed in this compact unit.
- 6 Low Maintenance Waco Lo-Temp has been proved troublefree by laboratories from coast to coast.
- Z Low Price \$440.00. Specify: No. 882 Waco Lo-Temp Refrigerated Bath, complete with Pyrex jar 12" in diameter, for 115 volt 50/60 cycle AC

Other sizes and accessories available to fit your needs. Write for Waco Bath Bulletin for complete information.

LABORATORY SUPPLIES AND EQUIPMENT WILKENS - ANDERSON CO. 4525 W. DIVISION ST. CHICAGO, ILL. 60651

### INDEX TO ADVERTISERS-22 April 1966

Ace Glass Inc.	559
Acton Laboratories Inc.	
American Optical Co.	
American Sterilizer Co.	
ASI Computer Div., EMR	424
Bausch & Lomb 489-492, 571 Beckman Instruments,	
Inc. 402, 406, 435	, 450
Bel-Art Products	
Blackstone Ultrasonics, Inc.	
Brinkmann Instruments	563
Bronwill Scientific	
Buchler Instruments, Inc.	425
Canal Industrial Corp.	
Chemical Rubber Co.	560
Clevite Corp., Brush Instruments	
Div.	409
Corning Glass Works 410,	411
Desaga Brinkmann	
Digital Equipment Corp.	421
Faling Com	420
Ealing Corp. Electro-Thermal Sales Corp.	420
Electro-Therman Sales Corp.	331
Fisher Scientific Co.	416
Gilford Instrument Laboratories,	
Inc.	428
Graphic Controls Corp.	417
Hacker, William J., & Co., Inc.	555
Hamner Electronics Co., Inc.	
Heath Co.	
Hewlett-Packard	
Honeywell, Apparatus Controls	555
Instrumentation Specialties Co.,	:
Inc.	571
International Chemical and	
Nuclear Corp.	429
International Equipment Co. 452, 553,	565
JEOLCO (U.S.A.), Inc.	579
Klett Manufacturing Co., Inc	552
Kontes Glass Co.	560
	309
Lab Cages, Inc.	
Laboratory Construction Co.	
Lea & Febiger	
Leitz, E., Inc.	454
Mallinckrodt Chemical	
Works 442,	551
Maryland Plastics, Inc.	571
Mathatronics, Inc.	566
Melpar, Inc.	577

Mercer Glass Works, Inc Mettler Instrument Corp	
Nalge Co., Inc.	
Nega File Co. New Brunswick Scientific Co.,	570
Inc	418
Orion Research Corp.	453
Packard Instrument Co., Inc.	456
Paillard, Inc.432,Parr Instrument Co.	553 572
Perkin-Elmer Corp.	431
Philbrick Researches	434
Phipps & Bird, Inc.	569
Photovolt Corp.	441
Polaroid Corp.	427
Professional Tape Co., Inc.	564
Reeve Angel 563,	574
Sanborn Div., Hewlett-Packard	
Sargent, E. H., & Co 438,	439
Sartorius, Div. of Brinkmann	
Instruments, Inc.	408
Saunders, W. B., Co. Scientific Products, Div. of	422
American Hospital Supply Corp.	436
Schleicher, Carl, & Schuell Co.	552
Scientific Notebook Co.	565
Sigmamotor, Inc.	565
Sigma Chemical Co.	572
Sobotka, Eric, Co., Inc.	565
Sorensen, a Unit of Raytheon Co.	A 1 A
Southern Precision Instrument	414
Co.	568
Teachers Insurance and	
Annuity Assoc.	551
Technicon Instruments Corp.	413
Technicon Instruments Corp Technical Measurement Corp	415
Tracerlab	556
Unitron Instrument Co.	449
Varian Associates, Recorder	
Div.	443
Vickers Instruments, Inc.	573
Waring Products Co. Warner-Chilcott Laboratories,	451
Instruments Div.	568
Wild Heerbrugg Instruments,	
Inc	567
Wilkens-Anderson Co.	576
Wilmot Castle Co.	412
Yellow Springs Instrument Co	558
Zeiss, Carl, Inc.	

SCIENCE, VOL. 152

# SENIOR SCIENTISTS

- GAS CHROMATOGRAPHY
- ELECTROCHEMISTRY
- ANALYTICAL CHEMISTRY

CONTINUED EXPANSION • NEW CONTRACTS AT MELPAR Creates Immediate Openings For SENIOR SCIENTISTS For Programs Involving:

### GAS CHROMATOGRAPHY

• Column Technology -- exploitation of new column materials and conditions of separation to achieve optimum resolution of a variety of complex mixtures

• Detector Technology — emphasis is to be given to special purpose ionization detectors in attempting to realize the ultimate in detection sensitivity

• Instrument Fabrication - a broad gas chromatography background is required in the fabrication of special purpose gas chromatographic equipment

### ELECTROCHEMISTRY

- Primary and secondary power sources
- Corrosion --- stress, bacterial, galvanic
- Fuel cells

### ANALYTICAL CHEMISTRY

- Applied problems in analytical chemistry
- Development of special analytical detection methods
- Electroanalytical chemical problems

Scientists with experience in more than one discipline may qualify for LABORATORY SUPERVISOR. All positions require M.S. or Ph.D.

Melpar is located in the historic hunt country of Fairfax County, Va., just 2 minutes from the new Capital Beltway, making all areas of Virginia, Maryland and the Nation's Capital just minutes away.

Write, in strict confidence, to: **Clarence Endsley, Manager Professional Employment** 

🖬 An equal opportunity employer F/M 🛲

# PERSONNEL PLACEMENT

### POSITIONS WANTED

Aquatic Ecologist. Ph.D. Teaching experience, re-search in radioecology, publications; desires teaching, research position. Box 89, SCIENCE. X

General Physiologist, Ph.D., seeks teaching-re-search position. Box 312, SCIENCE. 4/29

Microbiologist-Mycologist. Extensive experience with research and clinical microbiology. Desires academic appointment. Box 90, SCIENCE. X

Ph.D. Entomology-Parasitology. Numerous pub-lications. World-wide experience in research, teaching, operations and management. Box 91, SCIENCE. X

**Ph.D. Pharmacologist**, physiology, microbiology minors, veteran, young, postdoctoral training, publications, desires teaching/research position. Box 86, SCIENCE. X

Neurophysiologist Ph.D. Interdisciplinary back-ground in neuropharmacology, neuroanatomy, psychobiology. Desires research/teaching position. Box 78, SCIENCE. 4/29

Rad Phys & Chem. Ph.D. '44. Now head rad sect biomed institute. Seek academic post. Box 84, SCIENCE. X

### POSITIONS OPEN

The Botany Department of the University of British Columbia invites applications for an as-sistant or an associate professor in one of the following fields of study: plant biochemistry, morphogenesis, plant ecology and biophysics. Sal-ary range from \$8,000 to \$10,000 depending on rank. Send application with complete curriculum vitae and names of referees to Dr. G. H. N. Tow-ers, Head, Department of Botany, University of British Columbia, Vancouver 8, Canada.

POSITIONS OPEN

### MICROBIOLOGIST

For Research and Product Development Department. Knowledge of antibiotic assay methods, culture interpretation, sterility techniques. Background in im-munology desirable. Box 92, SCIENCE.

Opening for head librarian for scientific library. Degree

Library Committee, Woreester Foundation for Experi-mental Biology, Shrewsbury, Mass.

in library science necessary, scientific background desir-able. Salary commensurate with experience. For further information, write to Dr. Alan E. Erickson, Chairman,

### POSITIONS OPEN

Ph.D. PHYSIOLOGIST-PHARMACOLOGIST

## LIBRARY INDEXING AND INFORMATION RETRIEVAL

A responsible position now exists within the Agricultural Chemicals Division of this nationally known chemical corporation for a qualified individual with B.S. degree in Agricultura or related Biological Science, and exposure pertinent to the agricultural pesticide field. Experience should include indexing and retrieval of information from unpublished technical reports. All replies will be held in confidence. You are invited to explore this opportunity by submitting a resume including salary history to: PERSONNEL DIRECTOR

GEIGY CHEMICAL CORPORATION

Saw Mill River Road, Ardsley, N.Y.

An Equal Opportunity Employer (M/F) 

Unique opportunity for a Ph.D. with broad biological interests in drug research and development. To provide essential laison between laboratory and clinical scientists, aid in evaluating scientific data and help plan R & D activities. Oceasional travel and attendance at scientific meetings is an integral part of this position. Prior industrial experience is not required. Please send resume to Cyrus M Greenberg Please send resume to Cyrus M. Greenberg, Ph.D., Director of Scientific Employment, SMITH KLINE & FRENCH LABORATORIES, 1502 Spring Garden Street, Philadelphia, Pa. 19101. An Equal Opportunity Employer



(10 miles S.W. of Washington, D. C.)

### POSITIONS OPEN

Post-doctoral traineeship in research pathology, biochemistry or biomedical sciences sponsored by NIH. Ex-cellent laboratory facilities and research supervision. Renumeration according to previous training up to \$8000 per annum of which \$3600 are tax free. U.S. citizenship or immigration visa required. Apply Dr. Henry P. Schwarz, Philadelphia General Hospital, 34th Street & Curie Avenue, Philadelphia.

#### STAFF EDITOR-SCIENCE

STAFF EDITOR—SCIENCE Leading Chicago based education publisher seeks an aggressive staff editor to assume complete re-sponsibility for development of physics-chemistry project. Duties include working closely with au-thors and writers; helping conceptualize the pro-gram; reviewing and evaluating manuscript. A minimum of 3-4 years editorial experience and a bachelor's degree in either physics or chemistry are required. This is an excellent opportunity with a growth oriented company. Reply to Box 93, SCIENCE.

## SENIOR RESEARCH MICROBIOLOGIST Ph.D. Level

Required By

### SQUIBB INSTITUTE FOR MEDICAL RESEARCH

Splendid opportunity for a recent graduate, Ph.D., Microbiologist or Biochemist. Must be well trained in both disciplines. Will work on long-range aspects of fermenta-tion process development.



EMPLOYMENT MANAGER E. R. SQUIBB & SONS INC.

New Brunswick, N.J. 08903 An Equal Opportunity Employer POSITIONS OPEN

### LIFE-SCIENCE TECHNICIANS

Bionetics Itesearch Laboratories, Inc., one of the na tion's fastest growing independent life-science resear companies, has immediate openings for technicians the following disciplines:

Histopathology Hematology Immunology

Chemistry Animal care Microbiology In ultra-modern laboratories at Falls Church, Virginia, and Kensington, Maryland. BRL offers challenging op-portunities to assist in creative and applied research programs of carcinogenesis, teratogenesis, mutagenesis, and immunology.

Salaries will reflect experience and education. life and health insurance and many other ge benefits. Free generous

Bionetics Research Laboratories, Inc. P. O. Box 26 Falls Church, Va.

An Equal Opportunity Employer

### RESPIRATORY PHYSIOLOGIST

HAZLETON LABORATORIES, a leading in-dependent company specializing in the Life Sci-ences, needs a Ph.D. with 0-3 years' experience to conduct, design, coordinate, and evaluate ani-mal research programs in the field of respiratory abusications, and evaluate aniphysiology and inhalation toxicology. Opportunity for scientific meetings attendance and publicafor scientific meetings attendance and publica-tions. Liberal employee benefit program including profit sharing. Salary commensurate with experi-ence and education. Please send resume to: Hall A. Acuff

Assistant Personnel Manager Hazleton Laboratories, Inc. P. O. Box 30 Falls Church, Virginia 22046

An Equal Opportunity Employer

University of Basutoland, Bechuanaland Protec-torate, and Swaziland, Maseru, Basutoland, South-ern Africa. Lecturer or Senior Lecturer in Zoology. Ecologist preferred. Six copies of detailed application naming three referees should be sent to the Executive Associate, Overseas Educational Service, 522 Fifth Avenue, New York 10036, from whom further information may be obtained.

Zoologist interested in some aspect of field biology. Undergraduate teaching in California college of good reputation. Salary and rank open. Excellent facilities. Begin 1966 or '67. Apply Dean of Faculty, University of Redlands, Redlands, California.

# **Steroid Biochemist**

Large pharmaceutical research institute needs a Steroid Biochemist, with Ph.D. degree to direct a research group in the study of steroidogenesis and steroid metabolism as part of the endocrine research program.

The Sterling-Winthrop Research Institute is the research division of Sterling Drug, Inc., one of the world's largest producers of medicinal agents. Sterling Drug manufactures professional, consumer and industrial products identified by more than a thousand brand names. The Institute employs over 600 people and is engaged in a very active pharmaceutical research program. It is near Albany, on a plateau overlooking the Hudson **River Valley** 

Salaries open. Excellent employee benefits include educational assistance at local colleges. Travel and moving expenses paid.

Send complete resume to C. E. Alford, Director of Personnel

### STERLING-WINTHROP RESEARCH INSTITUTE

Rensselaer, New York An Equal Opportunity Employed POSITIONS OPEN 

## **BIO-MEDICAL** RESEARCH

- CLINICAL INVESTIGATION-M.D.
- PATHOLOGY-D.V.M.
- PHARMACOLOGY-Ph.D.

Recently organized Bio-Medical Research Department with completely new facilities, seeks several people for key positions in an expanding R & D Drug Program.

These new facilities are located in a pleasant Wilmington, Delaware, suburb offering excellent housing and schools. The positions offer interesting diversified assignments in a professional atmosphere with the opportunity for individual exploratory research. Attractive salaries and benefits. Open at present are: Open at present are:

#### CLINICAL RESEARCH PHYSICIAN

Responsibility for planning, coordination and evaluation of clinical studies. Require M.D. with preference given to candidates with additional post graduate training or experience in research. M.S. or Ph.D. degree an asset. Will report directly to the Director of Bio-Medical Research.

### SUPERVISOR OF PATHOLOGY

Responsibility for planning, execution and supervision of total scope and array of pathological functions associated with drug and chemical investigations. Require D.V.M. with preference given to candidate oriented to endocrinology, biochemistry, or inter-mediary metabolism and Ph.D. and/or board certification. Will report to manager of Veterinary Services.

### PHARMACOLOGISTS

Responsibility for drug screening and/or drug development work in areas of cardio-vascular or renal pharmacology or physiol-ogy or central nervous system functions. Require Ph.D. in Pharmacology with pref-erence given to candidate with some post-doctoral or industrial experience. Will re-port to Manager of Pharmacology.

To Investigate These Opening Send Curriculum Vitae and Salary **Requirements** To:

R. A. GRUBB

**Professional Employment** Representative



CHEMICAL INDUSTRIES, Inc.

WILMINGTON, DELAWARE, 19899

An equal opportunity employer

# The Market Place

BOOKS · SERVICES · SUPPLIES · EQUIPMENT

SUPPLIES AND EQUIPMENT

HYPOPHYSECTOMIZED RATS • Shipped to all points via Air Express For further information write HORMONE ASSAY LABORATORIES, Inc. 8159 South Spaulding Ave., Chicago 29, Ill.

SCIENCE, VOL. 152



**There is nothing really unique** about our recent change in marketing operations . . . unless, of course, you consider all the customer benefits — like, maybe, the four new field offices\*... or the plus value of direct company salesmen . . . and the extra technical services and assistance available from our own expert service engineers — working from fully staffed applications laboratories on both coasts.

**More significant is the fact** that, with the recent addition of our well known "JEM" electron microscope line to our ample line of magnetic resonance systems and general analytical instruments, JEOLCO, Inc. is now the only firm in America offering a truly comprehensive line of analytical research tools — encompassing every major field of scientific endeavor.

\*ATLANTA, CHICAGO, LOS ANGELES, MONTREAL

fied.

JEOLCO (U.S.A.), INC. 0 461 RIVERSIDE AVE., MEDFORD, MASSACHUSETTS 02155 0 (617) 396-8620 828 MAHLER ROAD 0 BURLINGAME, CALIFORNIA 94010 0 (415) 697-9220



## New AO Phasestar makes transparent materials look like a checkerboard

The new AO Phasestar makes the definitive difference with materials too transparent to see with conventional microscopy. Its exceptional resolution and flatness of field, plus its wide range of phase objectives, allow you to see each particle as clearly as if it were a black square placed on a red field.

And AO Phasestar can make the definitive difference in your work, whether it's in biology, medicine, industry or education. You get a superior visual quality that reveals aspects of materials never realized before. You examine unstained specimens without loss of clarity, saving time and possible damage to the specimen. You examine emulsions, slightly pigmented or faded preparations and living organisms under varying degrees of contrast (bright, dark, B-minus).

AO Phasestar is the first significantly new phase microscope in 20 years. It's unmatched in optical quality, versatility and convenience. The Phase Aperture Viewing Unit simplifies annulus alignment and checking. You can use AO Phasestar for routine brightfield work, dual viewing and

photomicrography.

So why don't you look into it? Find out from your AO Sales Representative which models and accessories can do the most for your work, or for more details, write:



AMERICAN OPTICAL COMPANY INSTRUMENT DIVISION • BUFFALO, NEW YORK 14215