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- **plasma wave observations**

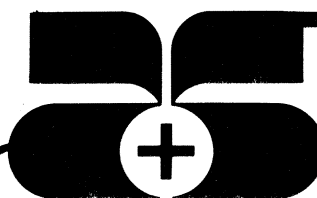
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Translucent paper offers tensile strength of 30 pounds per inch in machine direction and 15 pounds per inch across machine direction. Tear resistance is 25 grams in machine direction and 30 grams across machine direction. The paper is coated with a conductive substrate and an insulating layer. It offers improved physical characteristics and printing-plotting quality for overlays and for blueprint reproduction. Versatec. Circle 824.

Infrared Integrating Spheres

Integrating spheres are available for operation in the infrared. They are electrodeposited with a diffuse lambertian gold coating which has a total reflectance of greater than 98 percent from 1 to 10 micrometers. They are available in various sizes for 1 to 18 inches in diameter and may be selected with a variety of ports, adapters, baffles, and other accessories. Labsphere. Circle 826.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Reader Service Card (on pages 1266A and 1346G) and placing it in the mailbox. Postage is free.

—RICHARD G. SOMMER

Atomic Absorption Spectrophotometer

The IL951 Video II is a two-channel, double-beam instrument. It features an integral microcomputer and video display. It can determine the concentration of any two elements in a sample simultaneously. The operator programs the machine in English through 12 function keys. For commonly determined elements, parameters of analysis are stored in memory. The operator can also store parameters for up to ten pairs of elements. A graphics system displays calibration curves and shapes of absorbance peaks with and without correction for background. Instrumentation Laboratory. Circle 822.

Arteriovenous Oxygen Analyzer

A spectrophotometer is available to measure the difference in oxygen content of arterial and venous blood flowing through optical cuvettes. This method is useful for determining an organ's oxygen consumption or for measuring cardiac output by the Fick method. The instrument's linear readout is independent of hemoglobin concentration. Results are displayed in volume percent units on a digital meter. Outputs are also available for connection to recorders or computers. Avox Systems. Circle 823.

Miniature Electrodes

Tiny electrodes are available for sodium and potassium ions and for pH measurement. They are glass encased in stainless steel and they are designed for use with an external reference electrode. Each probe is 14.6 centimeters long and consists of a 10-millimeter glass tube protruding from a 2-millimeter (diameter) stainless steel tube. The diameter of the sensing glass is 1.5 millimeters. The sensor must be immersed to a depth of 1 mm and requires 30 seconds to respond. The MI-405 electrode for pH has a range of pH 1 to 14; the MI-420 electrode for

sodium ion has a range of 1 to 10^{-6} , with a selectivity of 300 : 1 over potassium at pH 7; the MI-440 electrode for potassium has a range of 1 to 10^{-5} , with a selectivity of 8 : 1 over sodium at pH 7. Microelectrodes. Circle 821.

Dry Block Heaters

The Dri-Block series of heaters features a main unit with recessed chambers that hold interchangeable block inserts. These inserts are aluminum blocks with holes in eight standard sizes for test tubes from 6 to 25 millimeters in diameter. The heat conductivity of the aluminum block and the close fit of the tubes in each block ensures high heat transfer to the sample tubes. The design of the heater, thermistor sensor and circuitry ensure control of temperature and uniformity. The units are available in three ranges: 30° to 100°C, 90° to 180°C, and 100° to 450°C. Techne. Circle 825.

Literature

Scientific Apparatus is a catalog of liquid samplers, linear recorders, pH meters, tissue homogenizers, and other instruments. Tekmar. Circle 818.

Mass Spectrometer Accessories lists electron multipliers, inlet systems, interfaces, probes, pumps, and other components. Vacumetrics. Circle 834.

Microscope describes the Labophot clinical and research microscope and its accessories. Nikon, Instrument Division. Circle 835.

Separation Media includes equipment and instruments for chromatography, electrophoresis, and cell studies. Pharmacia Fine Chemicals. Circle 827.

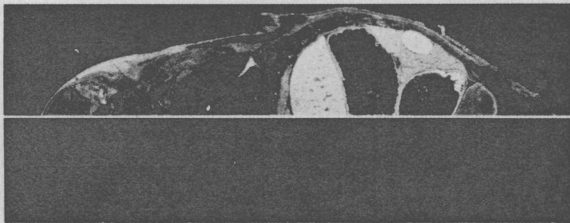
Ultraviolet-Visible Supplies and Accessories lists cells, racks, sample holders, electronic attachments, calibration accessories, lamps, photomultipliers, and much more. Varian Associates, Instrument Division. Circle 828.

Balances describes DeltaRange electronic top-loaders and includes a balance-selection guide and a catalog of accessories. Mettler Instrument. Circle 833.

Chemistry Instrumentation is a general catalog of pH meters, oxygen meters, conductivity and pH controller-recorders, and an extensive selection of electrodes. Chemtrix. Circle 830.

Capillary Chromatography devotes a section to column theory and applications for biochemists in addition to listing available instrumentation and supplies. Alltech Associates. Circle 832.

A new 12 times faster film for autoradiography

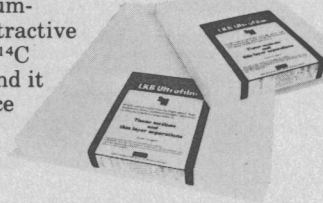


Autoradiogram of a mouse given a tritium-labelled substance. Upper part exposed to LKB Ultrofilm ^3H , lower part a traditional X-ray film (single X-RT).

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LKB 2208-193	Ultrofilm ^3H	25 sheets	35 cm x 43 cm

If you would like more information on LKB Ultrofilm ^3H , please send for data sheet 2208-190.

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POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per insertion. \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

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Air/Water Quality Chemist. B.S. 1974. Monitoring. Instrumentation. Quality assurance. Data reduction/analysis. Modeling. EIR's. J. F. Prince, 220 California Avenue, Number 208, Santa Monica, Calif. 90403. Telephone: 213-393-4693. X

Algal Ecologist. Environmental/evolutionary approach; chlorinated hydrocarbons; red tide toxins; publications; teaching experience. R. Michaels, Ecology and Evolution Department, State University of New York, Stony Brook, N.Y. 11794; telephone: 212-626-3443. X

Biochemist/Nutritionist/Physiologist. D.V.M., Ph.D. teaching experience in physiology; research interest in endocrine control of metabolic processes (cyclic nucleotides and protein kinases in lungs, adipose, and corpus luteum); 20 publications; scientific reviewer; seeks academic or research position. Box 174, SCIENCE. X

Field Ecologist. B.S. Field experience in jungle ecology; Ecuador. Broad experience in terrestrial and freshwater ecology; marine plankton surveys. Seeking position in field research. J. Leeds, P.O. Box 349, Fox Lake, Illinois 60020. 6/22, 29

Radiological Physicist (Health Physics)/Bioengineer. Sc.D. Seeks an academic position in the New York City area. Also seeks part-time consulting in radiology and/or nuclear medicine or research in parasitology. Dr. A. S. Trappier, Sr., 77 Lefferts Avenue, Brooklyn, New York 11225. Telephone: 212-284-4889 or 212-467-7889. X

Vertebrate Ecologist/Mammalogist. Ph.D. May 1979. Experience: 1 1/2 years of teaching at college/vocational school level, 4 years of research in wildlife ecology and behavior. Grant preparation experience and six publications. Seeks teaching and/or research position in ecology, wildlife biology, mammalogy, or behavior. Reply to: Box 192, SCIENCE. X

POSITIONS OPEN

TWO POSITIONS IN AQUATIC ECOLOGY LIMNOLOGIST AND FISHERIES SCIENTIST

The Appalachian Environmental Laboratory, Center for Environmental and Estuarine Studies (CEES), University of Maryland, is seeking applications for two assistant professor positions in aquatic ecology (limnology and fisheries science) to teach advanced courses and conduct research in areas complementary to the ongoing graduate program in fisheries science.

The successful applicants must have a Ph.D., a strong publication record, and be familiar with negotiating and managing research contracts. The positions are 12-month appointments with salary commensurate with experience. Closing date for application is 20 July 1979.

Contact:

Chairman, Search Committee
University of Maryland—CEES
Appalachian Environmental Laboratory
Frostburg State College Campus, Gunter Hall
Frostburg, Maryland 21532

The University of Maryland is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT IN NEUROSCIENCE/SURGERY (SCIENTIFIC PROGRAMMER). Develop and maintain hardware and software for auditory and somatosensory laboratories. Both laboratories configured around PDP-11 (LAB 40 and 03) respectively. Master's or equivalent with experience in assembly language programming and digital design essential. Salary: \$12,500 to \$19,000 annually. Send complete résumé to: Dr. William E. Brownell, Department of Neuroscience, Box J244, JHMHC, University of Florida, Gainesville, Florida 32610 by 1 July 1979. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR BIOMEDICAL ENGINEERING/ SYSTEMS PHYSIOLOGY

The Department of Biomedical Engineering of The Johns Hopkins University School of Medicine has an opening for a faculty member who will participate in its research and teaching activities. Each applicant should have a doctoral degree and be an established investigator with a demonstrated ability to develop an independently funded research program (preferably in an area other than cardiovascular physiology or neurophysiology) which emphasizes the application of engineering and/or mathematical techniques to the analysis of biological systems. Teaching responsibilities will include the organization of advanced graduate seminar courses, participation in the medical school physiology courses, and the supervision of graduate students. Candidates should send curriculum vitae, a list of publications, and the names and addresses of three references (who will not be contacted without permission), by 1 September 1979 to: Dr. Richard J. Johns, Director, Department of Biomedical Engineering, The Johns Hopkins University School of Medicine, 522 Traylor Building, 720 Rutland Avenue, Baltimore, Md. 21205. *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF GENETICS. Iowa State University is seeking a highly qualified Ph.D. for a tenure-track position open 1 September 1979. Postdoctoral research and publications required. Research efforts of applicant must include genetic aspects of dinitrogen fixation, preferably in conjunction with plant cell culture techniques. Duties equally divided between teaching and research. Candidates should submit curriculum vitae and three letters of reference by 15 August 1979 to: Dr. Donald S. Robertson, Department of Genetics, 10 Curtiss Hall, Iowa State University, Ames, Iowa 50011.

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BIOCHEMIST—ATHEROSCLEROSIS RESEARCH

Tenure-track position at assistant or associate professor rank for a biochemist with experience in lipoprotein structure and metabolism or lipid metabolism in relation to atherosclerosis. Applicant's experience in the field should be evidenced by an ongoing independent research program. Send curriculum vitae and three references with letter stating research interests and future projections to:

Dr. D. Rubinstein, Chairman
Department of Biochemistry
Dalhousie University
Sir Charles Tupper Medical Building
Halifax, Nova Scotia, Canada B3H 4H7

POSITIONS OPEN

The Department of Radiological Sciences invites applications for the position of **ASSISTANT OR ASSOCIATE PROFESSOR** in the **DIVISION OF NUCLEAR MEDICINE** at the University of California, Irvine, Medical Center.

Applicants should be Board-certified in nuclear medicine. Preference will be given to those individuals who are Board-eligible or Board-certified in diagnostic radiology. A large proportion of time in this position will be devoted to research and teaching of medical students, as well as supervisory and administrative duties.

Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.

If you are interested in this position, please write to the person listed below, including curriculum vitae, an autobiographical letter, and copies of any publications.

Harris S. Moyed, Ph.D.
Acting Chairman
Department of Radiological Sciences
University of California, Irvine
Irvine, Calif. 92717

Closing date: 31 July 1979.

ASSISTANT PROFESSOR IN ASTRONOMY

It is probable that the Department of Astronomy of The Ohio State University will have an assistant professor position open beginning in autumn 1979.

Ph.D. applicants should have at least 2 years of experience in teaching graduate level astronomy courses and introductory astronomy courses for nonscience majors. Also, applicants should have observational experience with moderate to large aperture telescopes preferably in conjunction with programs directed toward spectroscopic studies of galaxies and quasars. Particular preference will be given to those having experience with computerized data gathering and reduction systems.

Correspondence should be sent to: E. R. Capriotti, Chairman of Astronomy Department, The Ohio State University, 5042 Smith Laboratory, Columbus, Ohio 43210. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF MICROBIOLOGY: SEARCH REOPENED. The West Virginia School of Osteopathic Medicine is seeking a Ph.D. in microbiology. The candidate must have excellence as a virology teacher and the ability to teach general medical microbiology courses. Research facilities are available and research is encouraged. Send curriculum vitae, transcripts, and three letters of recommendation by 1 July 1979 to: Dr. Harold Laubach, Acting Chairman, Department of Microbiology, West Virginia School of Osteopathic Medicine, Lewisburg, West Virginia 24901.

THE UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF ZOOLOGY

Applications are invited for the position of **ASSISTANT PROFESSOR** in the Department of Zoology, University of British Columbia. Qualifications include a Ph.D. in biology or a related field. The successful applicant will be expected to teach and develop a strong experimental research programme in invertebrate embryology and morphogenesis. Upper level undergraduate teaching, and graduate student teaching and supervision are required. Salary will be commensurate with experience and duties. Curriculum vitae and the names of three referees should be submitted to: Dr. G. G. E. Scudder, Head, Department of Zoology, University of British Columbia, Biological Sciences Building, 6270 University Boulevard, Vancouver, British Columbia, Canada V6T 1W5. The expected date of appointment is 1 July 1980, subject to budgetary approval. Closing date for application is when position is filled.

CELL BIOLOGY—HISTOLOGY

A position is available in the area of cell biology and histology at the assistant or associate professor level in the Department of Anatomy, University of Virginia. Candidates should have at least 2 years of postdoctoral experience. Teaching responsibilities include histology for first-year medical students. The department stresses research and the candidate is expected to maintain an independent program of investigation. Interested persons should send their curriculum vitae and the names of three references to: Chairman, Department of Anatomy, Box 439, University of Virginia Medical Center, Charlottesville, Virginia 22908.

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POSITIONS OPEN

ASSISTANT RESEARCH BIOENGINEER position available beginning 1 August 1979 for 1 year at approximately \$17,500. Requires Ph.D. in engineering or computer sciences and experience in use of computer-based image processing facility, development of special programs for network analysis, and statistical analysis and evaluation of data for research dealing with vascular patterns. Reply with curriculum vitae to: **R. E. Roberson, Chair, Department of Applied Mechanics and Engineering Sciences, B-010, University of California, San Diego, La Jolla, California 92093.** An Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST

The Department of Biological Chemistry of the University of Maryland School of Medicine has a regular faculty position (assistant, associate, or full professor) for an individual having an active research program in mammalian cell membrane-bound proteins or related areas. Areas of research desired are those concerned with membrane protein structure-function relationships. Experience in sequencing, synthesis, chemical modification, and spectroscopic methods is desirable. Responsibilities will include the teaching of basic and clinical biochemistry courses to medical and graduate students. Send curriculum vitae and names of three references to: **Dr. Adil E. Shamoo, Professor and Chairman, Department of Biological Chemistry, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, Maryland 21201.** An Equal Opportunity Employer.

BIOLOGY ASSISTANT PROFESSOR to teach human anatomy and physiology. One-year appointment which may be extended. Ph.D. required. Submit résumé, transcripts, and three letters of recommendation to: **Dr. Sanford L. Jones, Department of Biological Sciences, Eastern Kentucky University, Richmond, Kentucky 40475.** Deadline: 1 July 1979. Equal Opportunity/Affirmative Action Employer.

CHIEF HLA TYPING LABORATORY

The Diabetes Research and Training Center (DRTC) of the University of Alabama in Birmingham is seeking candidates for the position of chief, HLA Typing Laboratory. The applicant selected will also be offered a position as an assistant research professor in the Department of Microbiology. Duties will include responsibility for overseeing all activities related to a large program aimed at understanding the association of HLA and disease. He or she will be responsible for ensuring that all investigative protocols are properly followed by the staff under the incumbent's supervision and will participate in development of long-term program plans, annual budget presentation, and defining and developing of specific short-term plans for program operation. The incumbent will answer directly to the associate director for research, DRTC. Applicants must have a Ph.D. or equivalent, a minimum of 2 years of experience in an HLA typing laboratory, and independent research in human immunogenetics as well as administrative experience. Applicants should submit a statement of interest, curriculum vitae with complete list of publications, and have three letters of recommendation sent to: **Dr. Ronald T. Acton, Diabetes Research and Training Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** Closing date for applications is 31 July 1979. An Equal Opportunity/Affirmative Action Employer.

DATA COORDINATOR

The Diabetes Research and Training Center is seeking candidates trained in epidemiology with experience in handling large data sets. Applicants must have an M.P.H. or equivalent. Knowledge and experience working with the HLA system as well as chronic diseases is also highly desired. The incumbent will have the responsibility for interacting with a variety of clinicians, scientists, and biostatisticians in protocol design as well as assembling for analysis numerous data, from studies on the association of HLA and disease. Applicants should submit a statement of interest, curriculum vitae with complete list of publications, and have three letters of recommendation sent to: **Dr. Ronald T. Acton, Diabetes Research and Training Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** Closing date for applications is 31 July 1979. An Equal Opportunity/Affirmative Action Employer.

Pharmacology

Boehringer Ingelheim Ltd. is staffing its new Research and Development Center, located in historic Ridgefield, Connecticut, 60 miles from New York City. Additional construction now underway emphasizes Boehringer's commitment to creating a significant resource for the continuing challenge of pharmaceutical research. Combined with competitive salaries and an outstanding benefit package, the environment is right for individual contribution and reward.

CNS:	MS plus 3-5 years industrial experience in screening and development of analgesic and CNS agents.
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Immunopharmacology:	BS plus 1-3 years <i>in vivo</i> and <i>in vitro</i> experience in delayed hypersensitivity; or 2-3 years experience in immediate hypersensitivity with responsibility for testing of anti-allergic substances.
Autonomic Pharmacology:	BS with 1 or more years <i>in vitro</i> experience in autonomic pharmacology testing procedures.

Please send resume with salary history in complete confidence to Mr. William G. Kuchta, Research and Development Center.



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PhD ASSOCIATE DIRECTOR ANALYTICAL BIOCHEMISTRY

SmithKline Corporation, a diversified multinational pharmaceutical firm located in Philadelphia, Pennsylvania, is seeking a dynamic individual for an important position in Drug Metabolism.

The successful candidate must hold a PhD in Biochemistry (Organic/Analytical) or pharmacology and have 5 or more years post doctoral research experience in Drug Metabolism. Preference will be given to those with research experience or education in most or all of the following:

- Instrumental methods of analysis (GC, HPLC, GC-MS) of drugs and biological media
- In vitro enzymatic techniques
- Drug metabolism studies in animals and man — should include compartmental analysis of data.
- Biopharmaceutics
- Metabolic isolation and identification

Under the direction of the Director of Analytical Biochemistry, the successful candidate will be expected to plan, supervise, coordinate and conduct drug metabolism and pharmacokinetic studies in animals and man. Additionally, the candidate will be expected to act as an advisor to research missions in metabolic matters, and propose and carry out research in the furtherance of research mission goals.

SmithKline offers an excellent compensation and benefits program, along with the opportunity for professional growth. Please send resume with salary history to: Mr. William G. Groves,

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POSITIONS OPEN

BIOLOGY, ASSISTANT PROFESSOR. Ph.D. with specialization in invertebrates, limnology, pollution, and general ecology. Duties include teaching, research, and directing graduate students. Publication record recommended. Submit résumé, transcripts, and three letters of recommendation to: **Dr. Branley A. Branson, Department of Biological Sciences, Eastern Kentucky University, Richmond, Kentucky 40475.** Deadline: 1 July 1979. *Equal Opportunity/Affirmative Action Employer.*

BIOLOGY/ZOOLOGY. Full-time tenure-track appointment to share in lecture and laboratory responsibilities in human anatomy and general zoology. Duties may include laboratory in physiology and bacteriology. Earned Ph.D. in zoology required. Postsecondary teaching experience in anatomy and general zoology preferred. Send application request by 16 July 1979 to: **Affirmative Action Officer, Winona State University, Winona Minn. 55987.** Appointment: September 1979. *An Affirmative Action/Equal Opportunity University.*

CLINICAL PHARMACOLOGY. The Department of Medicine at the University of California, San Francisco, is seeking a clinician-scientist at the assistant or associate professor level to direct the Division of Clinical Pharmacology. Applicants should possess expertise in drug therapy of a major class of diseases, concern for teaching of therapeutics to medical students and house staff, and ability to conduct independent basic research of high quality. Please forward curriculum vitae and three references to: **David W. Martin, M.D., Chairman, Clinical Pharmacology Search Committee, Room 1093-M, University of California, San Francisco, Calif. 94143.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

DEAN OF THE GRADUATE SCHOOL BAYLOR UNIVERSITY

Baylor University is accepting applications and nominations for the position of dean of the Graduate School.

The dean is the academic and administrative officer of the university's graduate programs leading to master's and doctor's degrees in the College of Arts and Sciences, the School of Business, the School of Education, the School of Music, the College of Dentistry, and the U.S. Army Academy of Health Sciences.

Major qualifications include a Ph.D., significant university administrative experience, and evidence of scholarship. Preference will be given to members of the Southern Baptist denomination as permitted by existing governmental regulations.

Nominations and applications will be received until 15 July 1979. Curriculum vitae should be sent to: **Dr. James L. McAtee, Department of Chemistry, Baylor University, Waco, Texas 76703.**

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DEVELOPMENTAL BIOLOGISTS

The Department of Biology of The Johns Hopkins University has two faculty positions available. One of these positions is at the assistant professor level while the other may be at any level. Individuals interested in research and teaching in the cellular, genetic, and/or molecular aspects of developmental biology are invited to apply.

Applications will be accepted until 30 September 1979. Send curriculum vitae, bibliography, and a description of research interests to:

**Chairman, Developmental Biology Search Committee
Department of Biology
The Johns Hopkins University
Baltimore, Maryland 21218**

The Johns Hopkins University is an Equal Opportunity Employer and does not discriminate on the basis of race, color, religion, national origin, age, sex, veteran status, handicap, or any other occupationally irrelevant criteria.

ELECTRON MICROSCOPY FACILITY DIRECTOR. The Research Service, VA Medical Center, San Diego, has an immediate opening for an experienced biomedical scientist of excellence with a working knowledge of SEM/TEM and administrative skills to direct a core EM facility. Salary: \$23,087 to \$27,453 for 12 months. Applicants should send curriculum vitae and three letters of reference to: **Lee W. Henderson, M.D., ACOS Research (151), VA Medical Center, 3350 La Jolla Village Drive, San Diego, California 92161.**

POSITIONS OPEN

DIRECTOR CELL CULTURE CENTER

The Department of Microbiology of the University of Alabama in Birmingham is seeking candidates for the position of director, Cell Culture Center. The applicant selected will also be offered a position as assistant research professor. The incumbent will be responsible for the scientific administration of the center, oversee the scaling up and large-scale production of cells and their products on an industrial-type basis, participate in development of long-term program plans and annual budget presentations, identify possible funding sources, and develop specific short-term plans for program operation. Applicants must have a Ph.D. or equivalent, a minimum of 2 years of experience in the large-scale growth of cells in large-scale fermentation-type vessels, as well as administrative experience. Independent research experience in growth of cells in culture is also desired. Applicants should submit a statement of interests and curriculum vitae with complete list of publications and have three letters of recommendation sent to: **Dr. Ronald T. Acton, Department of Microbiology, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** Closing date for applications is 31 July 1979. *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR OF CELL PHYSIOLOGY

Applications are invited for director of cell physiology unit of interdisciplinary laboratory in New York City. Experience with cell organ culture of avian and mammalian connective tissue necessary. Basic biochemical knowledge desirable. Faculty appointment and salary commensurate with ability and experience. Submit qualifications and recommendations to: **Orthopaedic and Research Laboratories, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032.** *We take Affirmative Action towards Equal Opportunity.*

The National Marine Fisheries Service (NMFS), *an Equal Opportunity Employer*, is seeking applicants for five positions available through Title IV of the Intergovernmental Personnel Act of 1970, under which the federal government pays salaries, agency or institution benefits, and travel expenses (amount allowed by federal status regulations) for personnel "loaned" to the government. The positions are: **ECOSYSTEMS MODELER, SAMPLING SURVEY STATISTICIAN, COMPUTER PROGRAMMER, and TWO OCEANOGRAPHERS (FIELD PARTY CHIEFS).** The 22-month assignments will be part of a project management team, stationed at the NMFS Galveston Laboratory, which has responsibility for management, analysis, and modeling relating to several multi-institutional, multidisciplinary environmental impact research projects relating to energy development in the Gulf of Mexico. Interested agencies, institutions, or individuals should contact: **Dr. Edward F. Klima, Director, NMFS, SEFC Galveston Laboratory, 4700 Avenue U, Galveston, Texas 77550; telephone: 713-763-1211, extension 501.**

FACULTY POSITION available for person interested in pursuing his or her own research and interacting with a group whose primary interests involve CNS mechanisms of temperature regulation, aging, and exercise. Rank and salary dependent upon qualifications. Joint appointment with basic science department possible. Send curriculum vitae, selected reprints, and addresses of four persons familiar with the applicant's academic qualifications to: **Dr. Lucien J. Cote or Dr. Larry I. Crawshaw, Department of Rehabilitation Medicine, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, New York 10032.** *An Equal Opportunity/Affirmative Action Employer.*

LABORATORY DIRECTOR— DEPARTMENT ADMINISTRATOR Department of Biochemistry, Rice University

Responsibility for the administrative and service operations of the department. Duties will include fiscal management of budgets, personnel management of staff, and research administration of grants and contracts. Substantial previous experience in the above areas and a reasonable scientific background are required. Send résumé and three letters of reference to: **Professor George J. Schroeffer, Jr., c/o Jan Griffin, Allen Center, Rice University, Houston, Texas 77001.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

FACULTY POSITION IN ATMOSPHERIC SCIENCES

The Department of Atmospheric Sciences of the University of California, Los Angeles (UCLA), has a ladder faculty position open, starting 1 July 1979, in the general area of atmospheric dynamics. Candidates must have a Ph.D. degree in atmospheric sciences or in a related area.

Besides carrying out research in his/her own area of specialization, the candidate will be expected to teach both graduate and undergraduate courses in atmospheric dynamics and/or synoptics. Applicants should submit résumés, including a list of publications and the names of three references, to: **Chairman, Department of Atmospheric Sciences, University of California, Los Angeles, California 90024,** by 10 July 1979. *UCLA is desirous of receiving applications from minorities and women candidates as well as from other qualified persons. UCLA is an Equal Opportunity/Affirmative Action Employer.*

FISHERIES BIOLOGIST, Virginia Polytechnic Institute and State University (VPI & SU), 12-month continuing appointment at assistant/associate/professor level. Teach appropriate courses in fisheries, advise undergraduate students, direct graduate studies at M.S. and Ph.D. levels, develop research program in area of expertise, and complement other faculty in an ongoing integrated research program.

Candidate must possess a Ph.D. in fisheries science or closely related field. Ability to conduct research, publish results, and obtain research grants must be evident. For appointment at the associate or full professor level, a strong record of research and publication is essential.

Submit curriculum vitae, undergraduate and graduate transcripts, and names of three references by 1 July. Informal inquiries from senior-level persons are invited. Send to: **Dr. Gerald H. Cross, Head, Department of Fisheries and Wildlife Sciences, VPI & SU, Blacksburg, Va. 24061.** *An Equal Opportunity/Affirmative Action Employer.*

FISH NUTRITION. A research position is now open at East Carolina University for a fish nutritionist. Initially, responsibilities of the position will be (i) to establish a research program on the nutrition of the American eel and (ii) to provide technical expertise on nutritional problems of an ongoing eel aquaculture program. Opportunities for nutritional studies of other species will be developed. The initial term of appointment will be 3 years. Submit résumé to: **William H. Queen, Institute for Coastal and Marine Resources, East Carolina University, Greenville, North Carolina 27834.** *An Equal Opportunity/Affirmative Action Employer.*

HEAD, DEPARTMENT OF PHARMACOLOGY

The University of Minnesota, Duluth, School of Medicine, is accepting applications for this position at the rank of professor or associate professor. The position is to be filled as early as 1 January 1980. Qualifications include the Ph.D. degree in pharmacology and/or the M.D. degree with research experience and training in pharmacology, a currently active research program, evidence of administrative leadership potential and teaching competence, and interest in developing a graduate program in pharmacology. This department of five faculty members is in a new and developing school with an orientation toward family practice. Development of interactions with the area medical community is encouraged. Applications should be received by 3 September 1979. Send curriculum vitae, including the names of at least three references, to: **Dr. Paul M. Anderson, Chairman, Pharmacology Search Committee, Department of Biochemistry, School of Medicine, University of Minnesota, Duluth, Duluth, Minnesota 55812.**

The University of Minnesota is an Equal Opportunity Educator and Employer.

LEGUME AGRONOMIST/BACTERIOLOGIST

To participate in international field experiments to assess yield response of tropical legumes to inoculation with *Rhizobium*. Ph.D. in legume agronomy, physiology, or bacteriology required. Must be prepared to travel extensively and have previous field experience with tropical legumes, and handling inoculants. Demonstrated ability to work on multidisciplinary team would be an advantage. Applications to: **Dr. Jake Halliday, NifTAL Project, University of Hawaii, P.O. Box "O," Paia, Hawaii, 96779.** *The University of Hawaii is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST

Immediate opening for Biochemist, Organic Chemist or Pharmacologist to isolate, characterize and study substances which interact with viruses. Training and/or experience in plant extractions would be helpful. Opportunity for original research. Ph.D. or equivalent degree required. Initial appointment for three years after which a career appointment is possible. Appointment would be at the research associate or higher level in the Division of Clinical Research, under the direction of Baruch S. Blumberg, M.D., Ph.D.

RESEARCH PHYSICIAN

Opening for Research Physician (M.D.) in the Division of Clinical Research, under the direction of Baruch S. Blumberg, M.D., Ph.D. Current work is focused on hepatitis B virus and its relation to cancer, and to other human and animal viruses which may have similar properties. Opportunity for original research. Initial appointment for 3 year period, after which a career appointment is possible.

IMMUNOLOGIST

Immediate opening for individual—Ph.D. or M.D. level—with experience in serology and immunology to study responses to infection with hepatitis B and related viruses. Opportunity for original research. Initial appointment for three years after which a career appointment is possible. Appointment would be at the research associate or higher level in the Division of Clinical Research, under the direction of Baruch S. Blumberg, M.D., Ph.D.

Send curriculum vitae and names of three references to: M.T. Dixon, Personnel Manager.

THE INSTITUTE FOR CANCER RESEARCH

The Fox Chase Cancer Center
Philadelphia, Pa. 19111

An Equal Opportunity/Affirmative Action Employer

U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE (NPS)

The National Park Service is currently recruiting for the position of **ASSOCIATE DIRECTOR, SCIENCE AND TECHNOLOGY**, GS-16/17 (salary range \$44,756 to \$50,100 per annum) in Washington, D.C.

The associate director, science and technology, is the principal assistant to the director, National Park Service, for science and technology programs, and is also responsible for providing the bureau's principal scientific and technological management for all programs of scientific studies and application within NPS. The scope includes natural and social sciences; natural history; science and technical information management; and research, inventory, monitoring, management, preservation, and protection of the national parks. The associate director implements all internal programs through subordinate organizational elements. He/she is responsible for staffing the program; for long-, intermediate-, and short-range planning; for establishing internal operating procedures; for allocating resources; and for recommending changes in program goals and policies.

Candidates must have 3 years of professional (specialized expertise) in one of the related scientific areas. Candidate must: (i) have extensive experience as manager in accomplishing goals, including responsibility for establishing basic patterns of organization; in delegating authority; developing overall operating policies and procedures; program planning and overall resource management; and the direct management and supervision of staff and (ii) be a recognized authority and leader in some area of scientific endeavor related to environmental/resource protection.

Applications and résumés are now being accepted from U.S. citizens by: **Chief, Branch of Employee Evaluation and Staffing, National Park Service, Personnel Division, 18th and C Streets, NW, Washington, D.C. 20240.**

If selected for this position, relocation expenses will be paid. Applications/ résumés with an updated Standard Form 161, Executive Inventory Record (where appropriate), must be received or postmarked no later than 15 July 1979. For further information telephone: **Nancy Garrett at 202-343-2002.** This position is designated for inclusion in the Senior Executive Service and the incumbent will be required to convert to the Senior Executive Service on or after 13 July 1979.

An Equal Opportunity Employer

Cardio-Pulmonary Research

A senior appointment with ICI

Cardiovascular research which is one of the most important aspects of research at ICI has resulted in an extensive range of successful drugs, in particular, beta blockers and lipid lowering agents.

We are now actively extending our pulmonary research programme.

Consequently we are looking for a person to head up this project which has the full support of the Company's extensive resources. It is envisaged that the right candidate will have considerable experience in pulmonary research.

You will be free to determine the approaches to be used and will lead a multi-disciplinary team of experienced researchers. You should be qualified in Medicine, Physiology or Pharmacology and have the

ambition to further your career in research.

Remuneration and other benefits, including relocation expenses, are designed to attract candidates of high calibre. The post is based at our modern research establishment located in beautiful parkland in Cheshire. Residential, recreational and school facilities in the area are excellent.

Please reply, enclosing your curriculum vitae to:-



Dr. J. Conway,
Head of Biological Research,
ICI Ltd,
Pharmaceuticals Division,
Mereside, Alderley Park,
Macclesfield, Cheshire, England.

POSITIONS OPEN

FOREST GENETICIST or PHYSIOLOGICAL FOREST ECOLOGIST. Assistant professor to teach dendrology and courses in area of specialization. Conduct research in genetics or ecology and physiology of hardwoods. Starting date: 1 January 1980. Ph.D. required. Should have one degree in forestry. Send résumé, transcripts, and three letters of recommendation by 1 September 1979 to: **Gene S. Cox, School of Forestry, Fisheries and Wildlife, University of Missouri, Columbia, Missouri 65211. Equal Opportunity/Affirmative Action Employer.**

IMMUNOLOGIST wanted for position in immunology research laboratory. Emphasis is to be on the role of the cellular immune system in transplantation and in oncology. Ph.D. degree and relevant research experience required. Salary negotiable. Send curriculum vitae to: **Dr. Lawrence D. Petz, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, Calif. 91010.**

IN-STATE COORDINATORS. The Nature Conservancy has positions with anticipated ecological inventory programs in several states. Duties: establish in-state center, help prepare classification and data management systems, collect data, plan, budget. Training provided. M.S. or Ph.D. in life sciences preferred; administrative ability; \$13,000 to \$17,000 range plus all benefits. *Equal Opportunity Employer.* Send résumé to: **1800 North Kent Street, Number 800, Arlington, Va. 22209.**

SIMON FRASER UNIVERSITY. Department of Kinesiology. A position is available for a person to work in an interdisciplinary department of physicians, physiologists, engineers, biologists, and biochemists. The department is interested in developing its courses in any of the areas of ergonomics human factors, industrial hygiene, community or occupational health. The appointee will be required to conduct research in one or more of these related areas. A Ph.D. or M.D. degree is an essential qualification. It is anticipated that the appointment will be made at the assistant professor level. Applications together with the names of three referees may be sent to: **Dr. E. W. Banister, Chairman, Department of Kinesiology, Simon Fraser University, Burnaby, British Columbia, Canada V5A 1S6.** This position will be filled subject to the availability of funds. Submission of applications will be until the position is filled.

MARINE COMPARATIVE PHYSIOLOGY OR BIOLOGICAL OCEANOGRAPHY

The graduate College of Marine Studies, University of Delaware, invites applications from qualified individuals for a tenure-track faculty position in either biological oceanography or comparative physiology. The position attracting the best candidate will be filled. Ph.D. and several years of demonstrated experience required. The candidate should be prepared to conduct an independent research program, advise graduate students, and teach two courses per year. The biological oceanographer should be a plankton ecologist, be prepared to interact in estuarine and coastal oceanographic research, and to teach an advanced biological oceanography course and specialty course of his/her choice. The comparative physiologist should have an interest in estuarine and coastal organisms with emphasis in chemical ecology, be prepared to teach a course in comparative physiology of marine organisms and a specialty course of his/her choice. Deadline for applications is 15 July 1979. Applications, including curriculum vitae with career objectives and names of at least three references, should be submitted to: **Dr. Frank Daiber, College of Marine Studies, University of Delaware, Newark, Del. 19711. The University of Delaware is an Equal Opportunity/Affirmative Action Employer.**

NEUROBIOLOGIST, M.D. or Ph.D., or equivalent. Salary and rank to the associate professor; level depends on qualifications and experience. Preference will be given individuals with independent research in multidisciplinary neuroscience. The candidate should be able to teach in medical and graduate programs in an integrated neurosciences curriculum. Areas within the program include neuroanatomy, neurophysiology, neurochemistry, and neuropharmacology. The department also teaches gross and developmental anatomy. Send applications and curriculum vitae, plus three references, to: **Chairman, Department of Neurobiology and Anatomy, The University of Texas Medical School at Houston, P.O. Box 20708, Houston, Texas 77025.** Applications will be accepted until 15 July 1979. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MEDICAL CYTOGENETICIST. Faculty position for experienced cytogeneticist. Responsibilities include operation of diagnostic clinical laboratory. Experience in prenatal amniotic fluid cell culture is essential. Salary negotiable. Send curriculum vitae to: **Harold Chen, M.D., Birth Defects Center, School of Medicine in Shreveport, Louisiana State University, P.O. Box 33932, Shreveport, La. 71130. An Equal Opportunity Employer.**

MICROBIOLOGIST. The Department of Biology, The University of Winnipeg, invites applications for a sessional appointment at the level of assistant/associate professor. The appointee will develop and teach courses in microbial taxonomy and immunology and undertake other assigned teaching. The position will be renewable for up to 3 years. Salary dependent on qualifications and experience. Starting date: 1 September 1979. Send curriculum vitae and names of three referees to: **Dr. R. A. Woods, Biology Department, The University of Winnipeg, Winnipeg, Manitoba, Canada R3B 2E9.**

NEUROPHYSIOLOGIST

The Department of Animal Physiology at the University of California, Davis, invites applications for a faculty position in neurophysiology. The position is available immediately and must be filled by 30 September 1980. Minimum qualifications include a Ph.D. and a demonstrated ability to conduct high quality research in neurophysiology. The successful applicant will be expected to teach courses in neurophysiology and to maintain an active research program. The appointment will be made on an 11-month basis at the rank of professor, associate professor, or assistant professor, depending on background and experience. Applicants should submit curriculum vitae, bibliography, recent reprints, the names of at least three referees; and any other supporting material to: **A. J. Sillman, Chairman, Neurophysiology Search Committee, Department of Animal Physiology, University of California, Davis, California 95616.** Closing date for applications is 15 September 1979.

The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minority groups.

NEUROPHYSIOLOGIST

A junior or senior faculty position for a Ph.D., M.D., or equivalent degree holder is available beginning 1 September 1979. Rank of this tenure-track position depends on the qualifications of the candidate. For consideration as assistant professor, a minimum of 2 years of postdoctoral experience is required. We are seeking a **neurophysiologist** to assume teaching responsibilities in autonomic nervous system and sensory organ physiology. Applicants are expected to participate in the teaching of medical, paramedical, and graduate students and to have an independent, vigorous research program, capable of competitive support from granting agencies. Deadline for applications is 1 August 1979.

Applicants should submit curriculum vitae, a summary of current and future research plans, and the names of three references to:

**Chairman
Department of Physiology
University of Kansas Medical Center
39th and Rainbow Boulevard
Kansas City, Kansas 66103**

An Equal Opportunity/Affirmative Action Employer

NEUROSCIENCE POSTDOCTORAL POSITIONS in the following areas: cellular neurophysiology (with W. H. Calvin, Ph.D., or P. A. Schwartzkroin, Ph.D.), epileptic neuron physiology and motor control (A. R. Wyler, M.D., A. A. Ward, Jr., M.D.), neuroanatomical mechanisms of epilepsy and deafferentation (A. B. Harris, M.D., L. E. Westrum, M.D., Ph.D.), physiology of human language and memory (G. A. Ojemann, M.D.), behavioral effects and mechanisms of action of anticonvulsants (J. S. Lockard, Ph.D.), and neurophysiology of peripheral nerve disorders (J. D. Loeser, M.D. and W. H. Calvin, Ph.D.). NRSA stipends for U.S. citizens or permanent residents with Ph.D. or M.D. and relevant research experience. Write individual faculty or:

**Dr. William H. Calvin
Chairman, Selection Committee
Neurological Sciences Training Program
Department of Neurological Surgery RI-20
University of Washington
Seattle, Washington 98195**

The University of Washington is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

PERINATAL-FETAL PHYSIOLOGIST

A full-time academic position is currently available in the Department of Obstetrics and Gynecology. The position will involve both teaching and research work and the rank and salary are dependent upon prior experience. If interested, please send curriculum vitae and bibliography to:

**William N. Spellacy, M.D.
Professor and Head
Department of Obstetrics and Gynecology
University of Illinois at the Medical Center
840 South Wood Street
Chicago, Illinois 60612**

Affirmative Action/Equal Opportunity Employer

PHARMACOLOGIST

Applicants are invited for the position of assistant professor to serve jointly in the Departments of Pharmacology and Anesthesiology. Duties include general supervision of research laboratories in the Department of Anesthesiology, independent research, and some teaching in pharmacology. Initial salary will be \$24,000 per annum. Applicants should possess a Ph.D. degree and have 2 years of postdoctoral experience. Preference will be given to applicants with interests in the area of drug disposition and with experience in the use of high-performance liquid chromatography. Send résumé, along with letters of reference, to: **Chairman, Department of Pharmacology, State University of New York/Upstate Medical Center, Syracuse, New York 13210. State University of New York/Upstate Medical Center is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE

The Epilepsy Center Research Laboratory has a position available for vertebrate neurophysiologist to work with cellular electrophysiologists and biochemists in investigations of the kindling model of epilepsy. The position will become available in the fall-winter of 1979. Send curriculum vitae and names of three references to either: **Dr. W. A. Wilson or Dr. J. O. McNamara, Epilepsy Center Research Laboratories, Box 2900, Duke University Medical Center, Durham, N.C. 27710. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS (two) for recent Ph.D. in research related to neurotrophic regulation of skeletal muscle. Preference will be given to candidates with competence in: (i) ultrastructural and electrophysiological investigations of the neuromuscular junction, (ii) tissue culture and protein analytical techniques. Positions (up to 3 years) are available immediately. Applicants should send curriculum vitae, summary of past research, and the names of three references to: **Dr. Wolf-D. Dettbarn, Department of Pharmacology, Vanderbilt University Medical Center, Nashville, Tenn. 37232. Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION. Starting 1 July or when available thereafter, for person to work on proteolytic enzymology in senescence legume nodules. Background in plant biochemistry, protein chemistry, and basic enzymology preferable. Salary \$13,000. Apply with curriculum vitae and three reference letters by 1 July to: **Dr. Fred W. Wagner, Associate Professor, Laboratory of Agricultural Biochemistry, The University of Nebraska-Lincoln, Lincoln, Nebraska 68583. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION is available immediately for biochemist or molecular biologist to study the transforming products of the DNA tumor virus SV40 and its interaction with and induction of host macromolecules. Experience in protein and enzyme characterizations useful. Send curriculum vitae and names of three references to:

**Dr. Robert B. Carroll
Department of Pathology
New York University School of Medicine
550 First Avenue
New York, N.Y. 10016**

POSTDOCTORAL POSITION in epithelial membrane physiology, available 1 September 1979, to study, using in vitro techniques, intestinal ion transport mechanisms and their regulation. Relevant pre- or postdoctoral experience necessary. Send curriculum vitae, résumé of research experience, reprints, and one reference to: **Michael Field, Department of Medicine, Box 400, University of Chicago, Chicago, Ill. 60637.**

**Department of Neurochemistry
Max-Planck-Institut für Psychiatrie Munich**

The Max-Planck-Gesellschaft offers

SCIENTISTS

the opportunity to set up their own research group in the above department.

Applicants should have already accomplished internationally recognised research within the general area of neurobiology, especially in membrane-receptor biochemistry, neurogenetics, neuroimmunology or neuroendocrinology.

Appointments will be limited to 5 years, the salary being within the scale AH3/C3. (about 50-55.000 DM p.a.).

Each group will be able to grant post-doc-/doctoral scholarships to German and foreign scientists; it will also be provided with its own laboratory, inclusive technical staff, appropriate equipment and adequate running costs.

Applications should contain a tabular curriculum vitae, a list of publications, and a short description of scientific work both achieved and intended, and should be submitted to the

Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.-Generalverwaltung- III a 4—Postfach 647, 8000 München 1,

before 30 September 1979.

DIRECTOR - Institute of Science and Technology

Applications and nominations are invited for the position of Director of the Institute of Science and Technology. This Institute is the parent organization for several major research units, including the Highway Safety Research Institute, the Great Lakes and Marine Waters Center, the Biophysics Research Division, the Macromolecular Research Center, and the Industrial Development Division. It has a substantial discretionary fund from which it assists other parts of the University in building research programs.

QUALIFICATIONS: Well established reputation in the physical, natural or engineering sciences. Demonstrated leadership in organizing research and managing interdisciplinary programs. Academic credentials suitable for tenured appointment in a science or engineering teaching department.

PRINCIPAL RESPONSIBILITIES: (1) Ensure high quality research in the institute's operating units; (2) Manage a discretionary fund to support and strengthen research in the University's teaching departments in the physical, natural and engineering sciences; (3) Assist in strengthening and expanding the University's relations with industry and business; (4) Serve as the principal advisor to the Vice-President for Research for physical, natural and engineering sciences; (5) Help represent the University's interests related to the physical, natural and engineering sciences to other institutions and agencies, including the federal and state government.

APPLICATIONS: Send letter of application, curriculum vitae and letter of recommendation to:



The University of Michigan

Professor Robert C. Taylor
Chairman of Search Committee
1525 Chemistry Building
Ann Arbor, Michigan 48109

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PHARMACEUTICAL RESEARCH

Expansion within our research facility has created two (2) attractive career opportunities at the PhD and MS/BS level within our analytical/metabolism department.

RESEARCH BIOCHEMIST

Qualified candidates will possess a PhD in Biochemistry with experience in the field of drug metabolism including radioisotope techniques, separation, purification, isolation and structural analysis of metabolites. Will assist in studies related to metabolism and the analysis of drug residues in animal tissues. Supervisory responsibilities will also be required.

RESEARCH CHEMIST

Qualified candidates will possess MS/BS in Biochemistry or Analytical Chemistry with experience in TLC, GC, HPLC, and mass spectroscopy. Will assist in drug metabolism studies as well as in the development of drug residue methodology.

We offer an excellent salary and benefit package and an atmosphere challenging professional growth. Facility is located adjoining historic state park in rural setting with access to major travel routes. Send CV including salary history in confidence to: Janet R. Borowy, Professional Employment:



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Washington Crossing, NJ 08560

All Inquiries Will Receive Prompt Reply

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Equal Opportunity Employer

DIRECTOR OF PHARMACOLOGY

PHARMACEUTICAL R&D

Sterling-Winthrop Research Institute, the research arm of Sterling Drug Inc. (a major pharmaceutical company), is implementing intensified new drug development programs. This exceptional position calls for a scientist with career experience in an R&D environment with knowledge of ethical pharmaceutical venture research. The position offers scientific and management high interest responsibilities as well as excellent career prospects.

Please send resume in confidence to
Mr. Randall K. Weston, Director of Personnel



**Sterling-Winthrop
Research Institute**
Division of Sterling Drug Inc.
Columbia Turnpike
Rensselaer, New York 12144

An equal opportunity employer, M/F

POSITIONS OPEN

POSTDOCTORAL POSITIONS available starting immediately. Salary range: \$14,000 to \$16,500 plus fringe benefits. Please send curriculum vitae. Projects: (i) Retrovirus gene expression and integration; molecular cloning, DNA sequencing, in vitro construction of mutants; contact: **Dr. Eric James**. (ii) Terminal deoxynucleotidyl transferase and human leukemia; background in protein purification and antibody technique preferred; contact: **Dr. Mary Sue Coleman**. (iii) Nucleotide metabolism and immunodeficiency; contact: **Dr. John J. Hutton**. (iv) Structure and function of methylated 5'-termini in plant viral and cellular messenger RNA; contact: **Dr. Robert E. Rhoads**. All four positions in: **The Department of Biochemistry, Medical Sciences Building, University of Kentucky, Lexington, Ky. 40536**.

POSTDOCTORAL POSITION IN BIOCHEMISTRY/IMMUNOLOGY for newly established clinical Liver Unit and research laboratory. Experience in protein and/or immunochemistry required. Responsible for setting up procedures for protein isolation and labeling. Opportunity to carry out independent study related to liver disease. Salary to \$16,000. Available 1 July 1979. Contact: **William Gallo, Personnel Service, VA Medical Center, Danville, Ill. 61832; telephone: 217-442-8000, extension 236. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS

Cell biologist or biochemist to study control of cell division, tRNA modification, tRNA sequencing, and a protein chemist or enzymologist to study proteinases, proteinase inhibitors, cataract formation; 1 September 1979; \$12,000 to \$16,000. Send résumé and letters to: **Dr. B. J. Ortwerth, Eye Research Foundation, 404 Portland Avenue, Columbia, Mo. 65201. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION for studies in auditory neuroanatomy and neurophysiology. Address inquiries and applications to:

**W. Bruce Warr, Ph.D.
Human Communication Laboratories
Boys Town Institute for Communication
Disorders in Children
555 North 30 Street
Omaha, Neb. 68131**

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POSTDOCTORAL POSITION available 1 July 1979. Ph.D. in cardiovascular pharmacology or related field for research into the role of CNS epinephrine in blood pressure regulation. Experience with direct blood pressure measurements, enzymatic assays, and liquid chromatography with electrochemical detection preferred. One-year appointment, renewable. Stipend: \$10,000 to \$12,000, depending on experience. Send curriculum vitae and three references to: **Dr. Richard E. Tessel, Department of Pharmacology and Toxicology, School of Pharmacy, University of Kansas, Lawrence, Kansas 66045. Equal Opportunity/Affirmative Action Employer. Qualified men and women of all races and persons with disabilities are encouraged to apply.**

POSTDOCTORAL POSITIONS. To study chemistry and cell biology of adhesive glycoproteins (fibronectin) of mammalian cells and structure and biosynthesis of elastin. Specific area of investigation to be decided, depending on candidate's expertise/interests. Send résumé and three references to: **Dr. Robert M. Senior, Department of Medicine, Washington University at The Jewish Hospital of St. Louis, 216 South Kingshighway, St. Louis, Mo. 63110.**

POSTDOCTORAL POSITION for fall 1979 in gene expression in mammalian oocytes and embryos. Experience in cytology, tissue culture, and especially techniques of analysis of nucleic acids and electrophoresis of proteins desirable. Send curriculum vitae, publication list, and names of three references to: **Dr. Rosemary Bachvarova, Department of Anatomy, Cornell University Medical College, 1300 York Avenue, New York, New York 10021.**

POSTDOCTORAL POSITION for physical chemist or surface chemist to study basic mechanism in calcium oxalate stone formation. Strong interaction with Material Science Department. Salary: \$13,500 with annual cost of living increment up to 3 years. Send résumé and the names of three references to:

**Birdwell Finlayson, M.D., Ph.D.
Urology, Box J247 JHMC
University of Florida
Gainesville, Fla. 32610**

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

Two **POSTDOCTORAL POSITIONS** available immediately. One concerns mechanism of action of receptors to a tripeptide in a model system using *Hydra*. A strong background in biochemistry and cell biology desired. The second position concerns the study of mechanism of two enzymes immobilized to the same surface, and their application to ultramicro biochemical analyses. A background in enzymology, protein chemistry and/or pyridine nucleotides will be useful. Salary range: circa \$12,000. Partial lecturer appointment possible. Send letters of inquiry, curriculum vitae, and letters of recommendation to:

**Dr. Howard M. Lenhoff
Faculty Research Facility
University of California
Irvine, Calif. 92717**

All qualified candidates welcome; minorities and women encouraged to apply.

POSTDOCTORAL POSITION available for recent Ph.D. in pharmacology or biochemistry with background in cellular pharmacology and familiarity with cell culture techniques. Experience with protein purification, PAGE, or transport studies helpful. Send curriculum vitae, area of interest, and names and phone numbers of three references to: **Chairman, Department of Pharmacology, Uniformed Services University, 4301 Jones Bridge Road, Bethesda, Md. 20014. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION, THEORETICAL CHEMISTRY

A position is available, starting this fall, to help with a research project on the development of a molecular understanding of electrochemistry, initially the meaning of electrochemical potentials, Lippmann and Gibbs equations, and so forth. Applicants should be familiar with theories of liquid metals and ionic liquids and methods of statistical mechanical calculations. Salary is \$10,000 to \$12,000, plus fringe benefits, and there is a possibility of renewal after 1 year. Send résumé and two or more letters of reference to: **Jerry Goodisman, Department of Chemistry, Syracuse University, Syracuse, N.Y. 13214 by 1 October 1979. Syracuse University is an Equal Opportunity/Affirmative Action Employer.**

Position available—POSTDOCTORAL RESEARCH ASSOCIATE IN BIOCHEMISTRY.

Three- to five-year appointment to begin summer 1979. Project requires knowledge of and training in molecular biology, including recombinant DNA and cloning techniques.

Send curriculum vitae, bibliography, and names of three references to: **Dr. Isidore S. Edelman, Department of Biochemistry, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

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POSTDOCTORAL RESEARCH ASSOCIATE

Position open in fall 1979 for recent Ph.D. in chemistry with experience in some aspects of conductivity of organometallic compounds, for example, photoconductivity, electromodification, and so forth. The appointment would be initially for 1 year, renewable.

Send résumé, including the names of three references to:

**Dr. Manny Hillman
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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE (Ph.D.). Biochemistry/physiology of retina and ancillary tissues. Effects of nutrients with antioxidant activity of special interest. Requires strength(s) in one or more of: lipid chemistry/metabolism, enzymes, cell fractionation, histology, ultrastructure. Salary: \$12,000 to \$15,000, depending on training and experience. Available 1 July 1979. Résumé and three letters of reference to: **Dr. E. A. Dratz, Natural Sciences-II, University of California, Santa Cruz, Calif. 95064.**

POSTDOCTORAL RESEARCH ASSOCIATE. To investigate changes in the regulation of insulin production during aging in rats. Preference will be given to those with previous experience in biochemistry and/or endocrinology. Position to start immediately. Those interested send résumé, graduate transcripts, and letters of recommendation to: **Dr. Richard Adelman, Temple University Institute on Aging, 3420 North Broad Street, Philadelphia, Pa. 19140.**

UNIVERSITY OF MARYLAND SCHOOLS OF MEDICINE AND PHARMACY

RADIOPHARMACEUTICAL CHEMIST. The University of Maryland is soliciting applicants for a joint appointment in the Departments of Medicinal Chemistry/Pharmacognosy and Medicine. Applicants must be experienced in the development of new radiopharmaceuticals. Salary and academic rank dependent on background and experience. Please send curriculum vitae to: **Dr. Ralph Blomster, Chairman, Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy, University of Maryland at Baltimore, 636 West Lombard Street, Baltimore, Maryland 21201.**

INTERNATIONAL LABORATORY FOR RESEARCH ON ANIMAL DISEASES (ILRAD) NAIROBI, KENYA

RESEARCH ASSISTANT: to work on immunology and parasitic diseases. There are three vacancies for research assistants in the laboratory of the director of ILRAD. The research assistants should be qualified and should have experience in tissue culture, immunology, or parasitic diseases.

Terms: the salary will depend on age and experience. Perquisites include moving allowance, housing and commutation allowance, medical and retirement benefits.

Application, with curriculum vitae and the names of three referees, should be submitted to:

**The Director
ILRAD
P.O. Box 30709
Nairobi, Kenya**

to reach him not later than 13 July 1979.

RESEARCH ASSOCIATE—A postdoctoral position is available immediately for a Ph.D. to study intestinal electrolyte transport in isolated and re-constituted intestinal brush border and basolateral membranes. Experience in membrane isolation techniques is desirable. Send curriculum vitae, two references, and supporting material to: **Dr. Don W. Powell, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, N.C. 27514. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE. Postdoctoral position available in second half of 1979 to study H ion transport and intracellular pH regulation, employing microelectrode and radioactive tracer methodologies. The laboratory is part of an active group concerned with the mechanisms of ion regulation in cells. Interested candidates should send résumé and three letters of recommendation to: **Dr. Albert Roos, Department of Physiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Missouri 63110. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH IMMUNOLOGIST to work in newly established rheumatology-immunology laboratory. Applicant must have Ph.D. degree in immunology with experience in cellular immunology. Starting salary: \$23,087; excellent fringe benefits. Contact: **William Gallo, Personnel Service, VA Medical Center, Danville, Illinois 61832; telephone: 217-442-8000, extension 236. Equal Opportunity Employer.**

PATENT SCIENTIST

If you are a chemist with a BS/MS degree in Organic Chemistry and have a demonstrated interest in a patent related field as a career, we have a mutual interest. Our position offers independent and responsible work with scientists and patent lawyers to determine patentability of research leads and acquisitions, and to conduct patent validity searches and state-of-the art searches.

A person with 1-2 years experience with scientific literature and information search techniques including automated data base systems is required. Ability to read scientific German or French desirable and excellent written communication skills are required. Familiarity with biological sciences preferred.

We are a major, multi-national pharmaceutical corporation located in Cincinnati, Ohio. Please send resume stating qualifications and current salary level in confidence to:

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Odense University Denmark

A new position as Professor in Photosynthesis has been created in the Institute of Biochemistry, and is available for occupation as soon as possible.

It is desired to appoint a person whose research activities are experimental investigations of the functions of the photosynthetic membrane systems in eukaryotes and/or prokaryotes. A part of the current research in the Institute is concerned with electron transport in respiratory and photosynthetic systems, and the Institute is well equipped with special apparatus for this type of work.

The successful applicant will be expected to participate in the teaching programme of the Institute, which includes elementary courses common to science and medical students, advanced courses for science students and supervision of advanced project work.

Further information is obtainable from Institute of Biochemistry, Odense University, telephone (09) 15 86 00, ext. 2441.

The application should contain information about the candidate's teaching experience. It is expected that the successful applicant will eventually be able to teach in Danish.

The employment field covers the Ministry of Education and the institutions under it. The wage frame is 37, and the salary amounts to Danish Kroner 230.520,24 a year inclusive of bonuses as per 1 October 1979.

A professional selection committee will discuss the applications and their recommendation will be sent out to all applicants in its complete form.

Application in five copies, marked "Position No. 745" enclosing curriculum vitae and documentation for professional and pedagogical activities must be made to the Queen and sent together with all enclosures also in five copies to: Journalkontoret, Odense University, Campusvej 55, DK 5230 Odense M, Denmark, so that we will receive it on 1 October 1979 at the latest.

RESEARCH MICROBIOLOGIST

Exceptional opportunity to join Merck's highly regarded professional R&D laboratory staff. We're seeking an experienced research oriented individual with Master's Degree or equivalent in microbiology or immunology, solid grounding in aseptic techniques, and handling potentially pathogenic microbial organisms. Experience with biochemical techniques helpful.

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POSITIONS OPEN

POSTDOCTORAL POSITION(S) available in theoretical chemical research applied to biomedical problems in areas of metal organic biosystems, opiate narcotics, chemical carcinogens, chemical reactivity, intermolecular interactions, and DNA-small molecule interactions. Applicants should have background in quantum chemistry and computer science. Candidates with additional background in biochemistry and/or pharmacology preferred. Start September 1979. Send résumé and names of three references to: **Gilda H. Loew, Molecular Theory Laboratory, Department of Genetics, Stanford University Medical Center, Stanford, California 94305.**

RESEARCH ASSISTANT/COMPUTER PROGRAMMER

Position available in theoretical chemical research applied to biomedical problems. Subject areas include chemical carcinogenesis, opiate narcotics, and metal-organic biosystems. Background in chemistry/biochemistry/computer science with programming experience in one or more of the following systems: CDC 7600, IBM 370, PDP/1 Vax. Start September 1979. Send résumé and names of three references to: **Gilda H. Loew, Molecular Theory Laboratory, Department of Genetics, Stanford University Medical Center, Stanford, California 94305.**

RESEARCH ASSOCIATE

Applications are invited from individuals with a doctorate degree in organic or biological chemistry with at least 5 years of post-doctorate experience in bile acid biosynthesis and metabolism. Previous experience should be documented by publication in appropriate journals of original work demonstrating independence, originality, and knowledge of enzymology, chemical synthesis, and metabolism.

Individuals who qualify should send curriculum vitae and bibliography to:

**Box 1191, 420 Madison Avenue
New York, N.Y. 10017**

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Position available—1 July 1979—**RESEARCH ASSOCIATE**. Department of Biochemistry, Albert Einstein College of Medicine, Bronx, N.Y. 10461. Attention: **Dr. I. Listowsky**. Protein chemist and/or molecular biologist. Studies on structure and regulations of protein systems. Salary: \$12,000 to \$15,000. *An Equal Opportunity Employer.*

RESEARCH POSITION. M.D. or Ph.D. Immunochimistry experience with lymphocyte function for the development of a cancer detection system. Teaching hospital in Midwest. **Box 194, SCIENCE.**

UPPER OCEAN DYNAMICIST

An academic position (tenure-earning track) is presently available at the assistant professor level in the Department of Oceanography, Naval Postgraduate School (NPS). An ocean dynamicist involved in the modeling of the upper ocean is sought. The candidate should be competent in the analysis of pertinent observations, have some at-sea experience, and be able to teach a variety of graduate courses in physical oceanography. The NPS has access to excellent computer, data archive, and research vessel facilities. The Department of Oceanography has a faculty of 15 and emphasizes faculty and student research in upper ocean and air-sea interaction processes. There is a student body of 80 to 100. Salary will be determined by qualifications of the successful candidate. By 1 September, send curriculum vitae, the names and addresses of three references, and a statement of research and instructional interests to:

**Faculty Search Committee
Department of Oceanography
Naval Postgraduate School
Monterey, Calif. 93940**

Visits by top candidates will be scheduled for September and October. A decision will be attempted by 1 November, and the position should be occupied by about 1 January 1980. *The Naval Postgraduate School is an Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH ASSOCIATE—Comparative physiology/endocrinology; \$11,875 per year. The person applying for this position should have broad training in comparative physiology, endocrinology, and biochemistry. In addition, specific interest in the hormonal regulation of vitellogenesis, and expertise in the development of new protein radioimmunoassays, tissue culture, and gel electrophoresis is required. Contact: **Dr. I. P. Callard, Department of Biology, Boston University, 2 Cummington Street, Boston, Massachusetts 02215.**

RESEARCH TECHNOLOGIST to work with Ph.D. biochemist in newly established clinical Liver Unit and research laboratory. Must have B.S. in medical technology, chemistry, or related fields; experience in protein chemistry desirable. Salary to \$12,000. Contact: **William Gallo, Personnel Service, VA Medical Center, Danville, Ill. 61832; telephone: 217-442-8000, extension 236. An Equal Opportunity Employer.**

SUPERVISOR-TECHNICIAN for histocompatibility testing laboratory experienced in HLA typing, MLR, and cytotoxicity assays. Administrative experience preferred but not necessary. Salary negotiable. Transplantation program associated with a major medical center and university. Gulf Coast region. Send résumé to: **Box 193, SCIENCE.**

VETERINARY PATHOLOGIST

Veterinary pathologist position open 1 August 1979 at the California Primate Research Center. Ph.D. in pathology and/or Board-certification required. The appointee will be responsible for the pathology service at the center and be expected to develop an experimental program in an area of special interest. There will be close interaction with the Primate Medicine Unit and opportunity for collaborating with research teams in perinatal biology and reproduction, and respiratory diseases. An adjunct academic appointment in the Department of Veterinary Pathology will provide interaction with graduate and professional students. Level of appointment and salary dependent on qualifications. Staff includes three postgraduate pathology trainees and four staff research associates. Send complete curriculum vitae, including bibliography and names of at least three references, to: **Director, California Primate Research Center, University of California, Davis, California 95616.** The position will remain open until filled. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

PERIODICAL SEARCH

Wanted for Science's archives. Original issues of 1880-1882 *Science* (subtitled "A Weekly Record of Scientific Progress"). The first issue was dated 3 July 1880; the last was dated 4 March 1882. We want to assemble a full set of the 82 published issues of this early journal, the forerunner of the present *Science*. If you have any issues of the 1880-1882 *Science* that you would be willing to part with, please write: **Janet Kegg, Library, American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005, or telephone 202-467-4428.**

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS

Applications are invited for interdepartmental post-doctoral traineeships focusing on environmental pathology of the respiratory tract in man and experimental animals. Areas of specialization include respiratory physiology, immunology, carcinogenesis, cell biology, biochemistry, and inhalation technology. Salaries and conditions are those of other NIH funded traineeships. For further information contact: **Dr. Philip B. Kane, Department of Pathology, Health Sciences Center, State University of New York, Stony Brook, Long Island, N.Y. 11794. Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

POSTDOCTORAL POSITIONS CELL BIOLOGY

The Cell Biology Group of the Worcester Foundation for Experimental Biology announces the availability of postdoctoral fellowships. The members of this group are: Earl Baril, Edward Berger, William Crain, Grant Fairbanks, Jay Greenberg, Ronald Luftig, Thoru Pederson, Harriet Robinson, Richard Vallee, Samuel Wadsworth, Robert Weihsing, and Paul Zamecnik. These are 2-year appointments with possible renewal; the initial salary is \$11,000. Applicants should submit curriculum vitae, a brief synopsis of their Ph.D. thesis research, and at least three letters of recommendation. Candidates should indicate the faculty member(s) with whom they would wish to work if a fellowship is awarded.

Application materials should be sent to: **Cell Biology Group, Postdoctoral Fellowship Program, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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CONFERENCE

The Sixth Cold Spring Harbor Conference on Cell Proliferation will be held at the Cold Spring Harbor Laboratory from 4 to 9 September 1979. The title of the conference will be **Viruses in Naturally Occurring Cancers**. For this meeting we plan to bring together leading investigators with diverse backgrounds whose interests vary from molecular biology and genetics to epidemiology.

Topics to be considered include: Herpes viruses, papova- and adenoviruses, and RNA tumor viruses.

Advance registration is required and attendance will be limited because of space. For additional information write to: **Registrar, Cold Spring Harbor Laboratory, P.O. Box 100, Cold Spring Harbor, New York 11724, or telephone: 516-692-6660.**

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