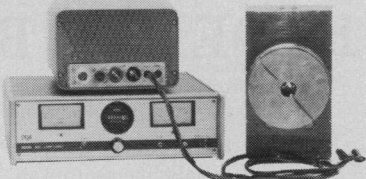


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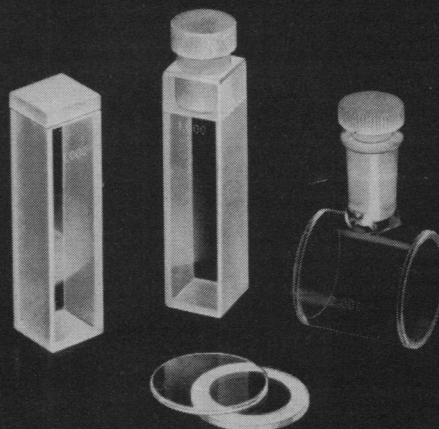
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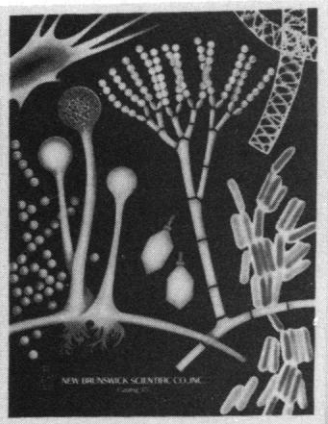
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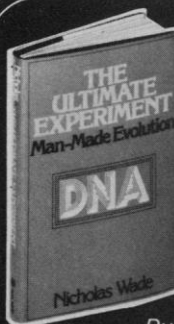
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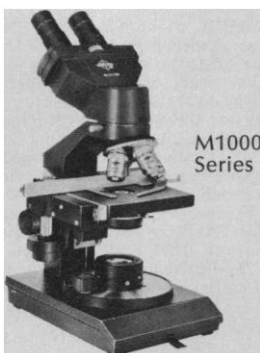
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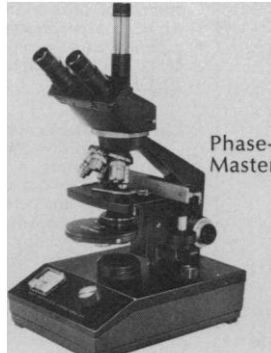
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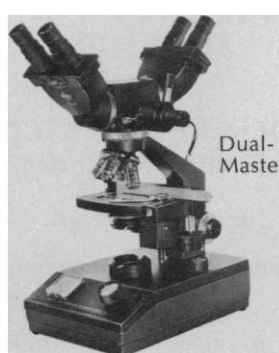
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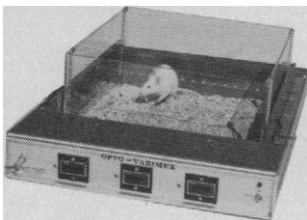
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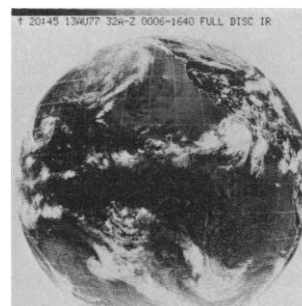
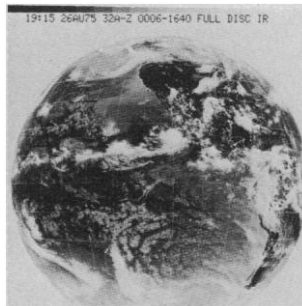
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The University of Alaska/Naval Arctic Research Laboratory, an Equal Opportunity Employer, solicits applications for the full-time permanent position of animal research facility supervisor. Correspondence should be directed to: **Dr. Gary A. Laursen, Assistant Director for Science, Naval Arctic Research Laboratory, Barrow, Alaska 99723 (telephone: 907-852-6588/7333).** Supervisory duties will include management of five-person staff and 161 arctic animals of 13 species in support of scientific research. Housing and food is provided. Salary will range from \$18,000 to \$23,000, depending on experience. *The University of Alaska is an Equal Opportunity/Affirmative Action Employer.*

AQUATIC ECOLOGIST

ICHTHYOPLANKTON. M.S. degree, experience desirable. Successful applicant will be responsible for designing field studies, directing projects, sampling ichthyoplankton and macroplankton, data management, and report writing. Applicant must be interested in ecological problems with ichthyoplankton and doing original research. Send curriculum vitae and names of three references to: **Dr. Robert J. Naiman, Academy of Natural Sciences of Philadelphia, Benedict Estuarine Research Laboratory, Benedict, Maryland 20612.** *Equal Opportunity Employer.*

ASSISTANT PROFESSOR, MICROBIOLOGY. In 1978 two positions will be available involving teaching and research in molecular biology and contemporary microbial genetics at a large, midwestern university and medical school. Applicants with postdoctoral research experience are preferred. Send curriculum vitae, short description of projected research projects, and names of three references to: **Dr. Allen Markovetz, Acting Head, Microbiology Department, University of Iowa, Iowa City, Iowa 52242.** Deadline for applications is 1 February 1978. *The University of Iowa is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR—PHYSIOLOGY

We are recruiting for an individual with broad background in physiology or related disciplines and proven research ability. Interest in endocrine mechanisms preferred, but exceptionally well-qualified applicants in other areas are encouraged to apply. Will participate in teaching medical and graduate students in a modern laboratory setting with excellent facilities and equipment 40 miles from New York City. Please send curriculum vitae to:

**Dr. John Lenard
Department of Physiology
COLLEGE OF MEDICINE AND
DENTISTRY OF NEW JERSEY
RUTGERS MEDICAL SCHOOL
P.O. BOX 101
Piscataway, New Jersey 08854**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION

Available early 1978 for research in structure of virus envelopes and mechanisms of viral penetration and budding. Recent Ph.D. with experience in cell culture, organization of animal cell surfaces, and/or fluorescent probe techniques preferred.

Please send curriculum vitae and references to:

**Dr. John Lenard
Department of Physiology
COLLEGE OF MEDICINE AND
DENTISTRY OF NEW JERSEY
RUTGERS MEDICAL SCHOOL
P.O. BOX 101
Piscataway, New Jersey 08854**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT DIRECTOR. The Office of Arid Lands Studies (OALS) assistant director must have established excellence in publishing, proposal preparation, and grant management. The assistant director will develop a research segment within OALS which will complement current activities involving information systems, natural resource management, environmental impact assessment, technology transfer, technology assessment, use of arid-adapted vegetation, and applied remote sensing. Areas of future interest within OALS include arid lands energy development, environmental assessment and modeling, and/or policy analysis. The successful candidate must have a Ph.D. or equivalent in a field appropriate to her/his area of expertise (energy, environmental modeling, or policy analysis) and at least 5 years of postdoctoral research experience plus 2 years of administrative experience. Candidates should forward their résumé plus a minimum of three letters of reference to: **Dr. J. D. Johnson, Director, Office of Arid Lands Studies, University of Arizona, 854 North Park Avenue, Tucson, Arizona 85719.** *Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

UNIVERSITY OF VICTORIA Victoria, British Columbia, Canada DEPARTMENT OF BIOCHEMISTRY AND MICROBIOLOGY ASSISTANT PROFESSOR

Applications are invited for the position of assistant professor in the Department of Biochemistry and Microbiology, effective 1 July 1978.

The successful candidate will be required to teach undergraduate and graduate classes in microbiology and to establish a research program preferably in one of the following fields: immunology, virology, bacterial genetics, or bacterial physiology.

Applications, including curriculum vitae, names of three referees, and a list of publications should be sent to: **Dr. A. T. Matheson, Chairman, Department of Biochemistry and Microbiology, University of Victoria, P.O. Box 1700, Victoria, British Columbia, Canada V8W 2Y2.**

Preference will be given to a Canadian citizen or a landed immigrant in Canada at the time of making the application, or one who has had extensive academic training or experience in Canada.

The University of Victoria reserves the right not to fill these vacancies.

WASHINGTON UNIVERSITY ASSISTANT/ASSOCIATE PROFESSOR OF BIOLOGICAL CHEMISTRY

A position is open in the Department of Biological Chemistry at either the assistant or associate professor level. Applicants should have demonstrated ability in research. Preference will be given to applicants interested in physical biochemistry or in regulation of gene expression in eucaryotes. Applicants will be expected to participate in teaching of medical students as well as graduate students.

Interested applicants should send us a curriculum vitae and a brief summary of their research plans. They should also ask three scientists well acquainted with their work to send to us letters of recommendation. Address all correspondence to:

**Chairman, Department of Biological Chemistry
Washington University School of Medicine
660 South Euclid Avenue
St. Louis, Missouri 63110**

Washington University is an Equal Opportunity Employer.

ASSISTANT PROFESSOR OF PHYSIOLOGY

We invite applications from highly qualified individuals with a commitment to research and teaching. We are especially interested in those with a background in renal or respiratory physiology. Teaching responsibilities are for medical students in human medical physiology and graduate students in area of specialty. Applicants must have a Ph.D., 2 years' postdoctoral experience, and potential for carrying out an independent research program. Applications close 31 December 1977. Applicant should send a curriculum vitae and a brief description of anticipated future research directions and request that three letters of recommendation be sent to: **Joseph D. Welty, Ph.D., Section on Physiology, Division of Biochemistry, Physiology and Pharmacology, The University of South Dakota School of Medicine, Vermillion, S.D. 57069.**

Equal Education and Employment Opportunity/Affirmative Action Institution.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, BERKELEY. An anticipated opening (fall 1978) pending budgetary approval at the **assistant professor** level in **biological psychology.** Persons with research interests in neural plasticity (neural system development and behavior, or neural mechanisms of learning and memory) are especially encouraged to apply. Salary range: \$15,000 to \$16,600, depending on qualifications and experience. Please send by 1 February 1978, curriculum vitae material, for example, résumé, names of references, and research papers to: **Dr. Arnold L. Leiman, Chair of the Search Committee, Department of Psychology, University of California, Berkeley, Calif. 94720.** *Equal Opportunity Employer. Minority and women candidates are urged to apply.*

ASSISTANT PROFESSOR OF BIOLOGICAL SCIENCES

The Department of Biological Sciences of the University of Southern California is examining applications from qualified researchers in the areas of membrane biophysics. While preference will be given to those experienced in electrophysiology, applications in any related area will be considered. Promotion to tenure will depend upon establishing an outstanding program of research and teaching. A curriculum vitae, a statement of research interests, copies of relevant publications, and three letters of recommendation should be sent by 1 December 1977 directly to: **William O. McClure, Department of Biological Sciences, University of Southern California, Los Angeles, California 90007.** *The University of Southern California is an Affirmative Action/Equal Opportunity Employer. Minority and women candidates are encouraged to apply.*

UNIVERSITY OF CALIFORNIA DEPARTMENT OF GEOLOGY AND GEOPHYSICS

The Department of Geology and Geophysics anticipates authorization (pending final budgetary approval) to hire an **assistant professor** with teaching and research interests in the **geology of mineral deposits**, including ore-forming processes and world resources, and with experience in mining or exploration.

Applicants should send, by 1 January 1978, curriculum vitae and names of at least three references to: **Professor T. V. McEvilly, Chairman, Department of Geology and Geophysics, University of California, Berkeley, Calif. 94720.**

The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.

BIOCHEMIST required to work on lung growth and development. Research experience in cyclic nucleotide field is desirable. Two-year appointment. Submit curriculum vitae, including the names and addresses of two referees, to: **Dr. W. M. Thurlbeck, Professor and Head, Department of Pathology, University of Manitoba, Health Sciences Centre, 700 William Avenue, Winnipeg, Manitoba, Canada R3E 0Z3.**

BIOCHEMISTS: two biochemists (postgraduate research biochemist: \$12,400 to \$15,000 or assistant research biochemist: \$17,500 to \$20,500); one trained in enzymology of nucleic acids to work on regulation of chromatin; one to work on regulation of mitochondrial membrane transport. Salary negotiable; to begin 1978. Apply to: **Ernest Kun, M.D., 101-SURGE Building, University of California, San Francisco, San Francisco, Calif. 94143.** *University of California, San Francisco is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION AVAILABLE

A faculty position is available at the Freshwater Biological Institute and the Department of Botany at the University of Minnesota. Applicants should have a Ph.D. and a special interest in the structure and function of algae and their environmental interactions. The research associations of the candidates will be primarily with molecular scientists on the Institute faculty. Candidates must be competent to teach phycoecology to advanced undergraduate and graduate students. It is anticipated that the position will be filled at the assistant professor level, but the possibility of hiring at a higher rank exists. Screening of applications will begin 15 November 1977, although applications will continue to be accepted after that date. Applications should be sent to: **Darlene Joyce, College of Biological Sciences, Room 123, Snyder Hall, 1475 Gortner Avenue, University of Minnesota, St. Paul, Minn. 55108.**

An Equal Opportunity Educator and Employer

POSITIONS OPEN

ASSISTANT PROFESSOR (RESEARCH)

Applications are invited for the post of assistant professor (research), subject to the availability of funds.

Duties: will include maintenance and supervision of an automated electron-probe microanalyser (JXA-50A with Kriesel Control), installation, maintenance, and supervision of a Micromass 30 thermal ionization mass spectrometer, and upgrading of data processing within the Geology Department.

Qualifications: an appropriate degree or diploma, preferably Ph.D. Experience in solid-state electronics, computer interfacing, and computing procedures is essential.

Tenure: initially for a 2-year period.

Salary: to be negotiated, depending on qualifications and experience.

Application: written application stating full personal particulars and details of qualifications and experience together with names and addresses of three referees should be sent to:

**The Head
Department of Geology
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1C 5S7**

ASSISTANT RESEARCH BIOCHEMIST DEPARTMENT OF SURGERY

Ph.D. in biochemistry, chemistry, physiology, or biology and one year or more of postdoctoral research experience to participate in large research program in gastrointestinal physiology and hormone isolation, liver physiology, pancreas physiology, and pancreas transplantation for diabetes. Expertise in clinical chemistry and peptide chemistry required. Send curriculum vitae, bibliography, and names of three references to: **Professor Marshall J. Orloff, Chairman, Department of Surgery, University of California, San Diego (UCSD) Medical Center, 225 West Dickinson, San Diego, Calif. 92103.** Salary related to rank and step of appointment within established salary schedule of UCSD.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT RESEARCHER

To conduct experimental and theoretical research on the interaction of electric and magnetic fields with neural tissue. We desire a person who has a Ph.D. with a physics background, experience with invertebrate neurophysiology, electrophysiology, and competence to develop theoretical models of plasma membrane structure/function relations. This is a nontenured position funded for 10 months and will commence 1 December 1977. Address correspondence to: **M. Beltman, Brain Research Institute, University of California, Los Angeles, California 90024.** *An Equal Opportunity/Affirmative Action Employer.*

CELLULAR NEUROBIOLOGIST

The Department of Neurobiology is seeking a new faculty member at the assistant professor level. The department is especially, but not exclusively, interested in immunological, biochemical, and electron microscopical approaches, and in appointing women and minority people. Please send curriculum vitae, a brief outline of research plans, and the names of three references to:

**Search Committee
Department of Neurobiology
Harvard Medical School
25 Shattuck Street
Boston, Mass. 02115**

FACULTY POSITION IN ANATOMY

Applications invited for a position in the Department of Human Anatomy. The appointment will be at the assistant professor level with the primary teaching commitment being in the area of gross anatomy. Demonstrated commitment and excellence in research and teaching are essential and one or more years of experience after the doctorate is required. Send complete curriculum vitae including a statement of research interests and names of at least three references to: **Dr. Allen C. Enders, Chairman, Department of Human Anatomy, School of Medicine, University of California, Davis, California 95616.** Closing date for applications is 15 December 1977. *University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

OPPORTUNITY AVAILABLE IN NEW YORK-PHARMACOLOGY DEPARTMENT. New York Medical College, *an Equal Opportunity/Affirmative Action Employer*, invites applications for the full-time position of **CHAIRPERSON**, Department of Pharmacology. Responsibilities include both undergraduate and graduate pharmacology programs. Academic rank and salary are commensurate with responsibility, preparation, and experience. *Minority and women candidates are encouraged to apply.* Applicants must submit curriculum vitae and other pertinent supportive data to: **Yutaka Kikkawa, M.D., Chairman of the Pharmacology Search Committee, Professor and Chairman, Department of Pathology, New York Medical College, Basic Science Building, Valhalla, New York 10595.**

CURATOR-MARINE INVERTEBRATES

Enlarge and maintain collections now featuring very large accessions of mollusks including western land snails. Head the department and conduct fundable research on marine invertebrates. Qualifications require Ph.D.: strong background in taxonomy; significant publications; experience in obtaining grants; demonstrated ability to work well with subordinates, colleagues, and superiors; and at least 4 years of related experience. Submit credentials to: **Chief Curator, San Diego Natural History Museum, Box 1390, San Diego, Calif. 92112.**

An Equal Opportunity Employer

DIRECTOR OF IMMUNOLOGY NEW PRODUCT DEVELOPMENT

To direct the development of new products and new product lines. A Ph.D. with heavy emphasis in humoral antibody work is a must. Also, a candidate should have a proven record of new product and/or method development.

Direct inquiries to:

**Personnel Department
Helena Laboratories
P.O. Box 752
Beaumont, Texas 77704**

Equal Opportunity Employer

GRAND VALLEY STATE COLLEGE OF ARTS AND SCIENCES FACULTY OPENINGS

PHYSICAL CHEMIST: Ph.D. required September 1978. Responsibilities include teaching basic and advanced physical chemistry courses and general chemistry.

ENVIRONMENTAL SCIENTISTS: Ph.D. in geography with emphasis on physical/natural resource geography, available January 1978. Responsibilities include teaching courses in climatology, environmental measurements, natural resources, and introductory and regional geography.

GEOLOGIST: Ph.D. with emphasis on structural geology, field research, and additional skill in one or more of the following areas: geophysics, engineering geology, economic geology, or metamorphic petrology. Required September 1978.

For all faculty openings preference will be given to individuals with previous faculty experience. The successful candidate will be expected to develop a quality research program for undergraduates. Rank and salary commensurate with qualifications and experience.

SABBATICAL REPLACEMENT 1978-1979

PHYSICS DEPARTMENT: Ph.D. in physics or engineering with additional background in applied physics, electronics, or physical chemistry. Preference will be given to individuals with previous faculty experience. Rank and salary commensurate with qualifications and experience.

Candidates should submit curriculum vitae and three names for reference purposes to: **Dr. John Gracki, Dean of the College of Arts and Sciences, Grand Valley State Colleges, Allendale, Michigan 49401.** *An Equal Opportunity/Affirmative Action Employer.*

POST DOCTORAL RESEARCH

The National Research Council is now accepting applications for the Research Associateship Programs for 1978. The programs provide scientists and engineers opportunities for postdoctoral research on problems in the fields of **CHEMISTRY — SPACE SCIENCES — PHYSICS — ATMOSPHERIC & EARTH SCIENCES — ENGINEERING — LIFE SCIENCES — MATHEMATICS AND ENVIRONMENTAL SCIENCES.**

Complete details including information on specific research opportunities and application materials may be obtained by writing:

**Associateship Office (JH606-S2)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, N.W.
Washington, D.C. 20418**

**NATIONAL
RESEARCH
COUNCIL**

RESEARCH SCIENTISTS

CELL BIOLOGIST, Ph.D., with background in electron microscopy, biochemistry, or both. Duties will include participation in cell and organ culture studies, cell separation, and identifications of different epithelial cell types. Experience in the use of sedimentation gradient procedures desirable.

BIOLOGIST, Ph.D., with broadly based background and talents necessary to deal effectively with sponsors and to become knowledgeable in all phases of *in vivo* carcinogenicity studies, including chemical preparations and delivery, recognition of clinical signs of toxicity, necropsy, data analysis, and report writing.

Please send curriculum vitae to the **Personnel Office:**

**Southern
Research
Institute**

2000 Ninth Avenue South
Birmingham, AL 35205



*An Equal Opportunity/Affirmative
Action Employer*

POSITIONS OPEN

FACULTY POSITION AVAILABLE CELL BIOLOGIST

Department of Biology
Tulane University

Applications by 1 February 1978 are invited for this position which will be available August 1978. The position will be filled at the assistant professor level. Candidates should be enthusiastic teachers and will be expected to develop and maintain a strong research program. The appointee will be expected to teach undergraduate courses in cellular and molecular biology and a graduate course in his or her field of specialization.

Applicants should send their curriculum vitae and a statement of their research interests and needs to: **Dr. Erik Ellgaard, Chairman of Search Committee, Department of Biology, Tulane University, New Orleans, Louisiana 70118.** Applicants should also have three letters of recommendation sent directly to the chairman of the Search Committee.

Tulane University is an Equal Opportunity/Affirmative Action Employer.

CHAIRPERSON DEPARTMENT OF OBSTETRICS AND GYNECOLOGY UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE

The University of Virginia School of Medicine is seeking a physician for the chair of its Department of Obstetrics and Gynecology beginning July 1978. Candidates should have outstanding clinical competence and demonstrated ability in teaching, research, and administration. All applications or nominations must be received by 15 December 1977. Send responses to: **Chairman, Obstetrics/Gynecology Search Committee, Box 386, University of Virginia School of Medicine, Charlottesville, Virginia 22901.** *The University of Virginia is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN CYTOGENETICS

CYTOGENETICIST, assistant professor of genetics for appointment effective 1 July 1978. Training in genetics and molecular biology essential. Responsibilities include undergraduate and graduate instruction in cytogenetics and evolution. Research interests may center on chromosomes and/or chromatin structure, genome organization, and gene expression or gene regulation in eucaryotes. A research program balanced between fundamental and applied problems in agriculture is desired. Send curriculum vitae, reprints, brief statement of research plans, and three letters of reference to:

**The Search Committee
Department of Genetics
345 Mulford Hall
University of California
Berkeley, California 94720**

Deadline for complete applications is 31 December 1977. *The University of California is an Equal Opportunity Employer. Women and minority applicants are welcome.*

CANCER CENTER DIRECTOR

The Mid-America Cancer Center Program (MACCP), a multi-institution, inter-disciplinary clinical cancer center based at the University of Kansas Medical Center, is seeking a director with a broad background in oncology. The MACCP provides opportunities in the development of comprehensive programs in research, education, patient care, and cancer control. Director will have academic appointment in department suitable to his/her background. Salary, commensurate with experience, will be cancer center-supported. Curriculum vitae and letter of interest should be sent to:

**Chairman, Search Committee
Mid-America Cancer Center Program
39th and Rainbow Boulevard
Kansas City, Kansas 66103**

POSTDOCTORAL POSITION: biophysical research of electron transport enzymes. Resonance Raman spectroscopy, conformational investigations, and studies of structural-functional relationships. Experience in spectroscopic techniques and manipulation of biological systems essential. One year; \$10,000 to \$12,000 per year, possibly renewal. Available immediately. Send curriculum vitae and two letters of reference to: **Dr. Yash P. Myer, Chemistry Department, State University of New York at Albany, Albany, N.Y. 12222.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ALBERT EINSTEIN COLLEGE OF MEDICINE NEW YORK

Applicants are invited for positions at the **assistant and associate professor** level for the Department of Molecular Pharmacology in the Division of Biological Sciences. Areas of particular interest include: chemical carcinogenesis and drug metabolism, molecular endocrinology, membrane biology, and neurobiology. Candidates with proven ability to do exceptional independent research and an interest in graduate and medical student teaching should submit curriculum vitae, bibliography, a short description of future research plans, and the names of three references to: **Pat Pellicone, Administrator, Department of Molecular Pharmacology, Albert Einstein College of Medicine, Room 219, Forchheimer Building, 1300 Morris Park Avenue, Bronx, New York 10461.** *Albert Einstein College of Medicine is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR OF CENTER FOR MARINE STUDIES

The University of Maine at Orono seeks a director of its newly-created Center for Marine Studies. The director will be responsible for administering the Center which has system-wide responsibility in the University of Maine for graduate education and research in marine programs as its primary functions. The director will also administer the University of Maine Sea Grant program and the activities of the Ira C. Darling Center at Walpole, Maine. This individual will be expected to play a major role in developing the Center. Initially, the Center will have 12 FTE's of professional staff, but this number will grow significantly as faculty members are offered the opportunity to join the program. The position calls for a Ph.D. or equivalent, demonstrated achievement as a creative marine scholar, and experience in research administration. The position includes a faculty appointment in an appropriate academic department. Rank and salary open, depending upon qualifications. Apply by 18 November 1977.

Write and send curriculum vitae to:

**Dr. Frederick E. Hutchinson
Vice President for Research and Public Service
21 Coburn Hall
University of Maine
Orono, Maine 04473
Telephone: 207-581-7048**

The University of Maine is an Equal Employment Opportunity Institution.

ECOLOGIST AND TAXONOMIST

The Department of Botany at the University of Wyoming will hire an ecologist and a taxonomist, one as assistant professor and the other open with regard to rank. Expertise in ecophysiology and chemosystematics is being sought, but qualified individuals in related areas will be considered. Candidates must have a Ph.D. and should submit evidence of a strong commitment to research as well as of teaching experience. Applicants should send a résumé, transcripts (if a recent graduate), reprints, and the names of three referees to: **Search Committee, Department of Botany, University of Wyoming, Laramie, Wyoming 82071.** Deadline for receipt of applications is 1 February 1978.

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

ENVIRONMENTAL BIOLOGY—Assistant or associate professor, for appointment in September 1978. Applicants must have the Ph.D. degree, a strong commitment to both research and teaching, and be able to provide evidence of research productivity. They should be professionally interested in pollution ecology, physiological ecology, behavioral ecology, environmental toxicology, or related area. Interested prospects should send a curriculum vitae, transcripts, and other supporting material to: **Dr. Arthur C. Benke, Chairman of Search Committee, School of Biology, Georgia Institute of Technology, Atlanta, Georgia 30332.**

The Georgia Institute of Technology is an Equal Opportunity/Affirmative Action Employer.

Applications for **POSTDOCTORAL POSITIONS** are being accepted through September 1978 in the Department of Physiology in the fields of endocrinology, biophysics, and exercise physiology. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Send curriculum vitae, copies of publications, and the names of three referees to: **Dr. Peter F. Hall, Department of Physiology, College of Medicine, University of California, Irvine, California 92717.**

POSITIONS OPEN

DIRECTOR, SCHOOL OF PHYSICS

Applications and nominations are solicited for the position of director of the School of Physics at the Georgia Institute of Technology, starting September 1978. The department, with 30 faculty members, 10 postdoctoral and research scientists, 55 graduate students, and 200 undergraduate majors, conducts an extensive program of graduate and undergraduate instruction and research. Applicants must have an excellent academic reputation in research and teaching, with some administrative experience, and must qualify for the rank of full professor. Curriculum vitae and a list of publications should be sent to: **Dr. R. F. Fox, Chairman, Search Committee, School of Physics, Georgia Institute of Technology, Atlanta, Georgia 30332.** Telephone: 404-894-5260. *Georgia Tech is an Equal Education and Employment Opportunity Institution.*

The Department of Biological Sciences of Carnegie-Mellon University has the following positions available: **EUKARYOTIC GENETICIST; MOLECULAR BIOLOGIST** applying restriction endonuclease technology in the area of structural studies of nucleic acids, genetic analyses, or recombinant DNA techniques. Candidates should have a Ph.D. (or equivalent) and preferably postdoctoral experience. Positions are at the **assistant professor** level, although higher appointments will be considered. Duties include teaching at the undergraduate and graduate level. Applicants should forward their curriculum vitae, three or more letters of reference, and a brief résumé of research plans to: **Search Committee (1), Department of Biological Sciences, Carnegie-Mellon University, 4400 Fifth Avenue, Pittsburgh, Pa. 15213.** *Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Biological Sciences at Stanford University is seeking qualified applicants for **TWO FACULTY POSITIONS** at the non-tenured level in the general areas of cellular and developmental biology. The successful candidates should have demonstrated independent research capabilities and are expected to participate in both undergraduate and graduate teaching programs in the department, as well as to carry out an active research program. Preference for one of the positions may be given to a person whose research activities are in botanical systems. Nominations or curriculum vitae should include the names of three references and may be sent to: **Robert T. Schimke, Search Committee Chairperson, Department of Biological Sciences, Stanford University, Stanford, California 94305.**

Stanford University is an Equal Opportunity/Affirmative Action Employer.

The newly-consolidated Department of Biology at Indiana University is planning to appoint **TWO NEW FACULTY MEMBERS** both of whom should have demonstrated excellence in biological research. One position is for a person with research interests in the general area of developmental or molecular genetics. The other is for a plant scientist, preferably a person able to offer a course in the biology of algae. It is likely that the appointments will be made at the level of assistant professor; however, higher level appointments will be considered. *Indiana University is an Affirmative Action/Equal Opportunity Employer.* Applications and references should be sent to: **Professor John R. Preer, Jr., Department of Biology, Indiana University, Bloomington, Ind. 47401** by 1 December 1977.

UNIVERSITY OF WISCONSIN-MADISON CENTER FOR HEALTH SCIENCES DEPARTMENT OF PHYSIOLOGY

A **faculty position** at the assistant professor level is currently available. Applications are invited from persons with postdoctoral experience and a demonstrated interest in membrane transport and biophysics. Duties will include responsibility for teaching renal physiology in core courses of the department. Interested candidates should send curriculum vitae, reprints, and the names of three references to:

**Chairman
Department of Physiology
UNIVERSITY OF WISCONSIN-MADISON
470 North Charter Street
Madison, Wisconsin 53706**

To receive full consideration applications should be received by 1 January 1978. *The University is an Equal Opportunity/Affirmative Action Employer. Women and Minorities are encouraged to apply.*

POSITIONS OPEN

BIOCHEMICAL AND CELLULAR RAMAN SPECTROSCOPIST

The Institute for Cancer Research is seeking to appoint a staff scientist, thoroughly grounded in the theory and use of Raman spectroscopy, whose research develops the methodology and applies it to biochemical, cellular, and physiological processes. Individuals at all levels of experience may apply. Send curriculum vitae, along with a statement of research interest, and the names of three references (letters need not be sent at this time) to: **Dr. Alfred G. Knudson, Jr., The Institute for Cancer Research, 7701 Burholme Avenue, Fox Chase, Philadelphia, Pa. 19111. An Equal Opportunity/Affirmative Action Employer.**

GENETICIST

Assistant professor in developing medical school/college genetics program. Among the areas of particular interest are: immunogenetics, somatic cell genetics, chromatin structure and function. Please send curriculum vitae, list of publications, and three letters of recommendation to the Search Committee by 30 December 1977.

**Genetics Search Committee
Room 214, Vail Building
Dartmouth Medical School
Hanover, New Hampshire 03755**

Dartmouth College is an Equal Opportunity/Affirmative Action Employer.

The Applied Earth Sciences Department at Stanford University is seeking a **GEOLOGIST** to design and lead a teaching and research program in the geological and geophysical aspects of exploration for petroleum and related fossil fuels. This faculty position requires experience in areas such as: (i) modern concepts of depositional systems, (ii) structural analysis of on- and offshore basins, (iii) geological interpretation of seismic records, (iv) participation in recent exploration programs, and (v) economic appraisal of energy resources. Send curriculum vitae and references to: **Chairman, Search Committee, Department of Applied Earth Sciences, Stanford University, Stanford, California 94305.**

POSITIONS OPEN

HISTOLOGIST-HISTOCHEMIST

Full-time faculty-technologist position; to assume professional and managerial responsibilities of large academically and service-oriented histopathology and histochemistry laboratories. Must have superior technical and educational background in light and ultrastructural histochemistry and managerial skills. Send curriculum vitae, bibliography, and the names and addresses of three referees to: **John R. Carter, M.D., Director, Institute of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, Ohio 44106.**

*Equal Opportunity/Affirmative Action
Employer, M/F*

MARINE INVERTEBRATE ECOLOGIST ECOLOGY AND EVOLUTIONARY BIOLOGY SCHOOL OF BIOLOGICAL SCIENCES UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Ecology and Evolutionary Biology is seeking an assistant or associate professor of marine invertebrate ecology, to begin 1 July 1978. Applicants should: (i) be adept at applying modern ecological theory to marine systems, particularly the nearshore subtidal and intertidal, (ii) have post-doctoral experience for consideration at the level of assistant professor, and (iii) be able to present evidence of substantial potential in research and graduate training, or in the case of applicants at the level of associate professor, be able to present a record of outstanding research and graduate training accomplishment. Teaching duties will include upper division undergraduate and graduate instruction in marine ecology.

All qualified candidates are welcome; women and minorities are encouraged to apply. Send curriculum vitae, publications, statement of interests and qualifications, and letters directly from three references to:

**Dr. Mark M. Littler
Chair of the Search Committee
Department of Ecology and Evolutionary Biology
University of California
Irvine, Calif. 92717**

The closing date for applications is 1 February 1978.

POSITIONS OPEN

IMPACT ECOLOGIST. Position available 1 January 1978 with University of Wyoming's Rocky Mountain Institute of Energy and Environment (RMIEE) with an affiliate teaching assignment in the Department of Zoology and Physiology. The incumbent will be responsible for the overall conduct of RMIEE impact assessment projects. Applicants should have a Ph.D. in aquatic or terrestrial ecology or a related field with experience in coordinating interdisciplinary environmental impact studies. Send résumé and names of three references by 15 December 1977 to: **Dr. Don L. Boyer, Rocky Mountain Institute of Energy and Environment, University of Wyoming, Laramie, Wyoming 82071. Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF MICHIGAN DEPARTMENT OF OTORHINOLARYNGOLOGY INSTRUCTOR TO PROFESSOR

Position available in the Department of Otorhinolaryngology, University of Michigan Medical School. M.D. degree, must be eligible for or certified by the American Board of Otolaryngology. Must be competent in all phases of clinical otorhinolaryngology. Responsibilities will include patient care, medical student teaching, and house officer education. Will also be expected to engage in basic or clinical research. Will also be responsible for above areas at Wayne County General Hospital. Code #600FO. A *Nondiscriminatory, Affirmative Action Employer.* Please send résumé to: **Box 403, SCIENCE.**

INSTRUCTOR, BIOCHEMISTRY, February 1978. To team teach biochemistry and biochemistry laboratory and conduct research on the biochemical mechanism of excitation-secretion coupling in the CNS. Starting at \$13,000 to \$14,000. Position available for 5 years. Send curriculum vitae, bibliography, and names of three references to: **Dr. Joseph A. Babitch, Chemistry Department, Texas Christian University, Fort Worth, Texas 76129** by 15 December 1977. **GRADUATE STUDENT STIPENDS** for spring and fall 1978 also available. *Texas Christian University does not discriminate on the basis of sex, religion, handicap, race, or ethnic origin.*

Postdoctoral Biological & Medical Research opportunities focusing on the effects of energy production

The Biological and Medical Research Division of Argonne National Laboratory is conducting a wide range of research programs focusing on the human health consequences of energy production. As part of a redirection and expansion in non-nuclear areas, this division now has opportunities offering unusual challenge as well as excellent potential for both recognition within the scientific community and growth with Argonne. Candidates should have strong records of academic accomplishment and 0-2 years of postdoctoral experience. We provide competitive salaries and fine benefits. To apply, send resume, including bibliography and supporting letter to: **Mr. R. Maxwell, Personnel Division, Argonne National Laboratory, Box BIM, 9700 So. Cass Avenue, Argonne, Ill. 60439**

Select your area of interest from:

• Aging • Bacterial genetics • Biological markers • Biophysics • Cell biology • Chemical & Radiation oncogenesis • Circadian rhythms • Epidemiology • DNA replication & repair • Liposomes • Molecular Structure • Mutagenesis • Photobiology • Radiobiology • Genetic & Mammalian toxicology • Viral oncology • X-ray crystallography • Stable isotope methodology



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POSITIONS OPEN

UNIVERSITY OF MICHIGAN DEPARTMENT OF OTORHINOLARYNGOLOGY (IMMUNOLOGIST) ASSISTANT OR ASSOCIATE PROFESSOR

Position available in the Department of Otorhinolaryngology, University of Michigan Medical School. Immunologist to conduct independent and scholarly research in basic immunology and to participate in departmental teaching in undergraduate, graduate, and professional school programs; minimum requirements include Ph.D. degree and one year of postdoctoral training, or equivalents; rank and salary appropriate to qualifications and experience; include reprints of most significant publications with curriculum vitae. Code # New Position. Please send résumé to: **Box 402, SCIENCE.**
A Nondiscriminatory, Affirmative Action Employer.

IMMUNOLOGIST

Assistant professor. Requirements: M.S. and at least 10 years of postdoctorate training. Must be capable of conducting independent research in cellular immunology, including the biology of normal and abnormal human lymphocytes, as witnessed by a significant number of relevant publications of which the candidate is senior author. Must be capable of participating in teaching of immunology to medical students and must have had adequate and related teaching experience. Please send curriculum vitae, copies of important publications, and names of three references to:

Dr. Benvenuto Pernis
Department of Microbiology
Columbia University
College of Physicians and Surgeons
701 West 168th Street
New York, New York 10032

INVERTEBRATE ECOLOGIST

Applications are invited for a position of assistant professor, School of Life and Health Sciences, University of Delaware. The appointment is available 1 September 1978 and is a tenure-track position. Responsibilities include teaching an undergraduate course in ecology and a graduate course in invertebrate biology. Candidates will be expected to develop an independent research program and to participate in normal academic duties. Curriculum vitae including reprints of published research and three letters of recommendation will be accepted until 1 January 1978 and should be sent to: **Dr. M. R. Tripp, School of Life and Health Sciences, University of Delaware, Newark, Delaware 19711.**

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INVERTEBRATE ZOOLOGIST AQUATIC BIOLOGIST

The Biology Department of Augustana College has a position available at the **assistant professor** level to teach invertebrate zoology and to develop the general area of aquatic biology. Applicants of quality will be expected to participate in introductory courses and to develop a field or lab course for the January term. Experience in marine biology will be helpful. The applicants must be devoted to excellence in teaching and a continuing research program in the context of a liberal arts institution. Send résumé and application to: **Dr. William R. Matthews, Vice President for Academic Affairs, Augustana College, Sioux Falls, South Dakota 57102.**

MICROBIOLOGY, ASSISTANT PROFESSOR. to develop an academic program in applied microbiology and teach basic microbiology. Candidate must have Ph.D. degree, evidence of teaching proficiency, and an active research program in applied microbiology, for example, industrial microbiology, medical bacteriology, or microbial ecology. Appointment effective fall semester 1978. Applicants should submit résumé and names of three references by 15 January 1978 to: **Dr. J. B. Clark, Chair, Search Committee, Department of Botany and Microbiology, University of Oklahoma, Norman, Oklahoma 73019.**
An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE: basic studies on biochemical and endocrinological regulation and differentiation of cells in culture. Candidate should be well grounded in collagen or carbohydrate chemistry. University laboratory. **David V. Cohn, Veterans Administration Hospital, Kansas City, Missouri 64128.**

POSITIONS OPEN

FACULTY POSITION. The Department of Pathology, University of Southern California School of Medicine is seeking a teaching coordinator to assist in instructional programs for medical and graduate students in pathology. M.D. or Ph.D. required. Candidate should have a strong interest in teaching and scholarly activity. Faculty rank and salary commensurate with experience. Reply to: **Chairman, Department of Pathology, 2025 Zonal Avenue, Los Angeles, California 90033.**

Equal Opportunity/Affirmative Action Employer

IMMUNOLOGIST/RESEARCH ASSOCIATE

Ph.D. or M.D. required. Applicant must have experience in supervising clinical immunology laboratory, including quality control and automation; and have demonstrated research productivity. Salary commensurate with experience. Reply to: **Chairman, Department of Pathology, 2025 Zonal Avenue, Los Angeles, California 90033.**

Equal Opportunity/Affirmative Action Employer

YALE UNIVERSITY SCHOOL OF MEDICINE SECTION OF NEUROANATOMY

Applications are invited for **one junior and one senior faculty position.** Candidates should have established record of accomplishments in research on morphological and functional development of the mammalian central nervous system, preferably in primates. Teaching duties in medical neuroanatomy and embryology and graduate developmental neurobiology. Submit résumé and names of references to: **Dr. Pasko Rakic, Chairman, Section of Neuroanatomy, Yale University School of Medicine, 330 Cedar Street, New Haven, Connecticut 06510.** *Applications will be considered without regard to race, religion, sex, or national origin. Yale University is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGICAL ECOLOGIST

The Department of Zoology, University of Texas at Austin, has openings for a faculty appointment in physiological ecology. Research-oriented department requires capability in graduate and undergraduate teaching and the development of an outstanding research program. Send curriculum vitae, selected reprints, a prospectus of research program, and names of five references by 1 January to: **Clark Hubbs, Chairman, Faculty Development Committee, Department of Zoology, University of Texas, Austin, Texas 78712.**

An Equal Opportunity/Affirmative Action Employer

PHYSIOLOGY FACULTY POSITIONS

Endocrine and respiratory physiologists are invited to apply for assistant professorship positions available 1 July 1978. A doctorate degree and potential for developing and carrying on independent research are required. Preference will be given applicants with postdoctoral training. Opportunities are available to teach undergraduate, graduate, and medical students. Send applications with curriculum vitae and names of three references to: **F. W. Zechman, Ph.D., Professor and Chairman, Department of Physiology and Biophysics, College of Medicine, University of Kentucky, Lexington, Ky. 40506.**

An Equal Opportunity/Affirmative Action Employer

MEDICAL ONCOLOGIST (junior). An appointment as assistant professor is available to a laboratory investigator-clinician to join a major academic program. Candidate should have independent investigative capability and be board qualified in medical oncology. *Stanford is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.* Send résumé, which will be treated confidentially, to: **Dr. Saul A. Rosenberg, Chief, Division of Oncology, Stanford University, School of Medicine, Stanford, Calif. 94305.**

POSTDOCTORAL RESEARCH ASSOCIATE—One position available in a laboratory employing a multidisciplinary approach to the study of atherosclerosis. Must have interest in cellular metabolism of the vessel wall and some experience in enzymology. The position will involve the use of animal models and tissue culture. If productive, the position may extend for several years, with the possibility of a faculty position. Send résumé and list of three references to: **Dr. Harvey Wolinsky, Department of Medicine, Albert Einstein College of Medicine, Bronx, New York 10461.**

POSITIONS OPEN

PLANT PATHOLOGIST

Utah State University, Department of Biology, is seeking an extension plant pathologist at the assistant professor level. Applicants must have a Ph.D. in plant pathology and possess the ability to establish rapport and communicate effectively with rural and urban citizens. Extension responsibilities will cover a diversified agriculture. Participation in the Biology Department, plant disease control course, and pest management program will be encouraged. Applicants should send curriculum vitae, transcripts, and three letters of recommendation by 15 December 1977 to:

Dr. Neal Van Alfen
Department of Biology
UMC 53
Utah State University
Logan, Utah 84322

Utah State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN SOLID EARTH GEOPHYSICS

Immediate 1-year opening, renewable for a second year. Candidate should have interest in the internal constitution and dynamics of the earth with special strength in computer simulation of three dimensional, variable viscosity, geophysical fluid dynamics models, and a background in plate tectonics and geology. Assignments will be in the geophysical interpretation of gravity data, general inverse problems, and upper mantle models. Please send a résumé, publication list, statement of research interests, and the names of three references to: **E. M. Gaposchkin, Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge, Mass. 02138.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Postdoctoral position available 1 January 1978 for persons with an interest in the role of biogenic amines in relation to depressant drug abuse or in relation to neuroendocrine regulation of the pituitary. Candidate must have completed a Ph.D. in one of the basic medical sciences and must have a biochemical orientation. Preference will be shown to candidates with a background in autoradiography, radioimmunoassay or tissue uptake and binding of putative neurotransmitters. Send curriculum vitae, copies of recent publications, and three letters of recommendation to: **Dr. William W. Morgan, Department of Anatomy, The University of Texas Health Science Center, San Antonio, Texas 78284.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available for tissue culture studies related to chemical carcinogenesis and aging. Specific areas include carcinogen activation by mammalian species of differing lifespans, and effects of steroids and flavones on carcinogen metabolism. Prefer candidate with some background in enzymology and general biochemistry. Salary in accord with NIH guidelines. Send inquiries to: **Dr. Arthur Schwartz, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140.**

POSTDOCTORAL RESEARCH ASSOCIATE in nutrient cycling and systems ecology. Applicants should have Ph.D. in ecology, expertise in nutrient (especially nitrogen) cycling, systems analysis, and soil organisms. Will participate in multi-disciplinary whole-system studies, model-experiment interactions. Salary negotiable; to begin on 1 January 1978. Send curriculum vitae and three letters of recommendation to: **Dr. David C. Coleman, Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, Colorado 80523** by 30 November 1977.

Colorado State University is an Equal Opportunity Employer and complies with Title IX requirements. Complaints should be filed with the Office of Equal Opportunity, Student Services Building.

Scripps Institution of Oceanography has an opening for **POSTGRADUATE RESEARCH IN PHYSICAL OCEANOGRAPHY** for a person with a good geological background to assist in the interpretation of numerous current meter records in submarine canyons. Appointment beginning February 1978 at \$13,000 to \$14,000 per year. Applications with curriculum vitae and references are to be sent to: **Professor F. P. Shepard, A-015, Scripps Institution of Oceanography, La Jolla, Calif. 92093.** *The University of California, San Diego, is an Equal Opportunity Employer with an Affirmative Action Program. Women and minorities are encouraged to apply.*

TEACHING SYMPOSIA ON
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TOPICS INCLUDE

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 Invalidity of Hodgkin-Huxley theory
 Cooperative interactions of cell cations
 Cell contractility in cation association
 NMR of H, D, Na, K, and P in cells

NMR = nuclear magnetic resonance

SPEAKERS INCLUDE

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PhD Biochemist/Pharmacologist

We are a leading industrial pharmaceutical company with international markets and a large research and development establishment at Groton, Connecticut. We are seeking a PhD Biochemist/Pharmacologist to carry out research into Diabetes and related metabolic disorders.

The scientist appointed will be expected to orientate research efforts towards the control of metabolism with the clear endpoint of developing new drug therapy for metabolic diseases. Work on novel biological mechanisms and methods for identifying potentially useful pharmacological activity and the publication of findings will be encouraged. As the scientist will operate in a multidisciplinary environment, an interest in chemical structure-biological activity relationships and in drug pharmacokinetics will also be required.

Applicants should hold a PhD in Biochemistry, Endocrinology or Pharmacology. Research experience in the general area of endocrinology or metabolism with a successful record of publication is essential; a particular interest in the secretion/action of peptide hormones would be desirable. A knowledge of Diabetes research would be a considerable advantage.

In addition to a stimulating work environment, Pfizer offers a competitive compensation and benefit package, and an opportunity to live in an attractive shore community.

Send curriculum vitae to: F. G. Ziegler,
 Pfizer Central Research, Eastern Point Road,
 Groton, CT 06340.



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POSITIONS OPEN

CHEMOTHERAPY FERMENTATION LABORATORY

Biomedical research center located 45 miles northwest of Washington, D.C., invites applications from persons interested in joining a group involved in the search for novel antitumor agents for the following:

- **MICROBIOLOGIST**—entry level staff position for Ph.D. with strong background in microbial genetics. Will be responsible for conducting research into the quantitative and qualitative effects of genetic manipulation on antibiotic production by selected producer microorganisms.
- **BIOCHEMIST or MICROBIOLOGIST**—postdoctoral appointment involving the development and introduction of novel screening techniques for the detection of biological activity in microbial fermentation broths.

M. L. Knill, Recruitment
Position Nos. 805 and 449
FREDERICK CANCER RESEARCH CENTER
Litton Bionetics, Inc.
P.O. Box B
Frederick, Maryland 21701
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MOLECULAR BIOLOGY FACULTY APPOINTMENTS

Two positions, one assistant, one full professorship, to begin July 1978. The two areas are **immunobiology** or **molecular immunogenetics**, with research on molecular aspects of immune system functions; and **nucleic acid enzymology**, with research in any area, including gene expression, using this expertise. The area of the senior appointment will remain open until later. Strong biochemical background suitable for classroom and graduate research instruction is required. Applicants should send curriculum vitae, bibliography, two representative publications, and a statement of future research goals and teaching areas. Candidates should also have three reference letters sent. Materials should be addressed to the appropriate person, either: **Dr. Gale A. Granger, Immunology Search Committee**, or **Dr. R. C. Warner, Nucleic Acids Search Committee**, Department of Molecular Biology and Biochemistry, University of California, Irvine, Irvine, Calif. 92717. Material should be received by 15 January 1978. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

ORGANIC CHEMIST UNIVERSITY OF WISCONSIN-MADISON

The Department of Chemistry is seeking applicants for an **assistant professor** position in organic chemistry starting in the 1978-1979 academic year. The primary requirement for this position is potential for distinction in research and teaching. *Applications from women and minority candidates are welcomed.* Applicants should have three letters of recommendation, a résumé, and a detailed statement of research interests sent to: **H. W. Whitlock, Department of Chemistry, University of Wisconsin-Madison, Madison, Wisconsin 53706.** *The University of Wisconsin-Madison is an Equal Opportunity Employer.*

ORNITHOLOGIST/BEHAVIORAL ECOLOGIST

Applications are invited for a full-time, regular (tenure track) faculty position in the Department of Zoology and Entomology at Colorado State University, beginning fall semester 1978. The appointee is expected to teach an introductory course in ornithology, and to develop an active research and teaching program in behavioral ecology. Ph.D. or equivalent required. Rank and salary will be commensurate with experience. Applications should include a curriculum vitae, a statement of professional goals, and the names of three references; inclusion of reprints of most important research is recommended. Apply by 15 December 1977 to: **Philip N. Lehner, Chairman, Ornithologist/Behavioral Ecologist Search Committee, Department of Zoology and Entomology, Colorado State University, Fort Collins, Colorado 80523.**

Colorado State University is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

POSTDOCTORAL RESEARCH ASSOCIATE CASE WESTERN RESERVE UNIVERSITY DEPARTMENT OF PHARMACOLOGY CLEVELAND, OHIO

Research position available for person interested in studying mitochondrial membrane enzymes and their role in regulation of fatty acid oxidation.

Background in enzyme characterization is desirable. Expertise in affinity chromatography, radioimmunoassay, and lipidology helpful. Salary negotiable. Send résumés and names of three references to:

Charles L. Hoppel, M.D.
Veterans Administration Hospital
10701 East Boulevard
Cleveland, Ohio 44106

POSITIONS OPEN

PHARMACOLOGIST

The Upjohn Company, a growing name in the pharmaceutical-health care fields, has a unique opportunity for a Ph.D. level pharmacologist with experience and interest in diseases of inflammation. Under Upjohn's research structure the scientist taking this position will be a member of a multidisciplinary group. He or she will have responsibility for a program in which new drugs can be discovered (employing relevant animal models) and developed for the prevention and treatment of rheumatoid arthritis, osteoarthritis, and related diseases.

Qualifications: a Ph.D. in pharmacology, immunology, or biochemistry; a minimum of 2 years of experience in conducting research on inflammation or related subjects; and ability to initiate independent research.

Living in Kalamazoo, a midsized southwestern Michigan community, means no commuting, immediate access to an excellent mix of cultural-recreational pursuits including lakes, nearby colleges, a four-season climate, and much more. Excellent benefits and salary.

Send résumé to: **Dennis Nevala, The Upjohn Company, 7171 Portage Road, Kalamazoo, Michigan 49001.**
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SENIOR RESEARCH MICROBIOLOGIST

A basic research position in a department involved with the discovery, characterization, and initial fermentation development of microbial chemotherapeutics. The position requires a Ph.D. or equivalent experience in microbial physiology or fermentation development. Postgraduate training and/or relevant publications are necessary.

A professional environment is offered in staff, equipment, and facilities, including competitive salaries and complete benefit package. Please send résumé in confidence to: **William T. Jackson, Employment Supervisor**

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TRAVELING LECTURERS

University of Maryland, University College seeks lecturers for non-laboratory science courses offered to military students overseas. Geologists, zoologists, biologists, and botanists with clear ability to teach in two of these areas sought. (i) Ph.D. or two M.A.'s, (ii) recent undergraduate teaching experience, and (iii) U.S. citizenship all essential. Families: positions require travel every two months; family housing and schools not provided. Apply (send résumé): **Assistant Dean/Overseas Program, University of Maryland, University College, College Park, Maryland 20742.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 January 1978. Ph.D. with strong background in biochemical pharmacology or neuropharmacology to work on receptor labelling in vascular muscle. Send complete curriculum vitae and names of three references to: **C. N. Gillis, Ph.D., Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, Connecticut 06510.**

An Affirmative Action/Equal Opportunity Employer

PSYCHOLOGY UNIVERSITY OF CALIFORNIA, SAN DIEGO

We seek an assistant professor working on neurological and/or physiological bases of cognition, perception, or sensation. Candidates are expected to interact with faculty in human information processing and teach undergraduate and graduate courses on neural basis of human information processing. Facilities available for research with small animals.

Have résumé, reprints, and three letters of reference sent to: **Recruiting Committee, Department of Psychology, C-009, University of California, San Diego, La Jolla, California 92093.** Deadline is 31 January 1978. *An Affirmative Action/Equal Opportunity Employer. Qualified women, minorities, and handicapped individuals encouraged to apply.*

RESEARCH ASSOCIATE. Immediate opening for Ph.D. in cell biology, biochemistry, or related field to join research program in chemical carcinogenesis and cell transformation. Experience in tissue culture desirable. Salary negotiable. Send résumé to: **Dr. P. S. Sabharwal, School of Biological Sciences, 101 Morgan Building, University of Kentucky, Lexington, Ky. 40506.**

An Equal Opportunity Employer

Case Western Reserve University is expanding its applied mathematics program. Applications are invited for **SENIOR FACULTY POSITIONS** in applied mathematics (full or associate professor). Responsibilities will be to teach both undergraduate and graduate courses and to conduct research in an area of applied mathematics. Preference will be given to candidates with experience in one or more of the following: (i) numerical analysis, (ii) asymptotic analysis, and (iii) mathematical modeling. The candidate should be competent in an applied area of the physical or social sciences or engineering. Salary and rank will be commensurate with qualifications.

Applicants should send résumé, list of publications, and names of three references to: **Professor Wilbert Lick, Chairman, Committee on Applied Mathematics, Case Western Reserve University, University Circle, Cleveland, Ohio 44106.**

An Equal Opportunity Employer

SENIOR RESEARCH VIROLOGIST. To work on research projects in animal virology including viral carcinogenesis. Ph.D. required with experience in development of anti-viral substances. Send résumé by 1 December 1977 to: **Kent R. Van Kampen, Head, Department of Animal, Dairy and Veterinary Sciences, Utah State University, Logan, Utah 84322.** *An Equal Opportunity/Affirmative Action Employer.*

PROGRAMS

PROFESSIONAL PROGRAM: DOCTOR OF OPTOMETRY (O.D.). Accelerated program of two calendar years specifically designed for the Ph.D. in the sciences to earn the O.D. degree. Excellent opportunities in health-related teaching and research; opportunity for an independent professional career. Program starts June 1978. **Division of Vision Sciences, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.** Telephone: 617-261-3430, ext. 34.

DOCTORAL PROGRAM-PHARMACOLOGY

Medical University of South Carolina, Department of Pharmacology, seeks qualified candidates for Ph.D. program. Interdisciplinary environment with research capabilities ranging from gas chromatography-mass spectrometry through cell cultures and animal studies to clinical studies of patients with disease. Research training is available in biochemical pharmacology, physiological pharmacology, drug metabolism, toxicology, analytical chemistry, and clinical pharmacology. Stipends available: \$3900 per year. Contact: **Graduate Training Director, Department of Pharmacology, Medical University of South Carolina, Charleston, S.C. 29401.**

LADY DAVIS FELLOWSHIP TRUST

P.O. Box 1255, Jerusalem, Israel

FELLOWSHIPS FOR STUDY AND/OR RESEARCH AT GRADUATE OR POST-DOCTORAL LEVELS AND VISITING PROFESSORSHIPS

in 1978-79

at the Hebrew University of Jerusalem and at the Technion-Israel Institute of Technology, Haifa

GRADUATE AND POST-DOCTORAL FELLOWSHIPS

ELIGIBILITY: Lady Davis Fellows will be selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization and qualities of mind, intellect and character.

Post-doctoral candidates shall have completed their doctoral dissertation before arrival in Israel.

All Fellowships are subject to the candidate's being accepted by the respective institution.

The Graduate and Post-doctoral Fellowships are tenable for a period of one year. They may be renewed for a second year and in special circumstances extended to a third year.

The grant is intended to defray the cost of the Fellow's travel and tuition fees and to meet reasonable living expenses.

APPLICATION: Graduate candidates may apply during their senior academic year or after they have undertaken study in a graduate school. Post-doctoral candidates may apply at an early stage of their professional career (not later than 3 years after completion of their doctoral dissertation).

Graduate and Post-doctoral candidates, including Israelis abroad, may obtain application forms from the Lady Davis Fellowship Trust at the above address.

Completed applications must reach the Office of the Trust not later than January 1, 1978.

VISITING PROFESSORSHIPS

These Fellowships are intended for candidates with the rank of Full or Associate Professor at their own institution. They are tenable for periods from one trimester (or semester) to a year.

APPLICATION: Forms may be obtained from the Lady Davis Fellowship Trust at the same address. Completed applications must reach the Office of the Trust not later than November 30, 1977.



Aquatic Ecologist

A position for a PhD in aquatic ecology with fisheries and/or plankton experience is now open with Texas Instruments' Hudson River Ecological Study in Buchanan, N.Y. The successful applicant will be a member of a team developing a community perspective for assessing the impacts of power plants. Examples of duties include analysis and interpretation of biological data in relation to physiochemical variables, primary and secondary production, faunal distributions, standing stocks and life histories.

Send resumes to: Dr. Ronald J. Klauda/
Technical Director/Texas Instruments
Incorporated/Hudson River Ecological
Study/P. O. Box 237/Buchanan, N.Y.
10511.

TEXAS INSTRUMENTS
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AIBS CONFERENCE

Assessment of Ecological Impacts of Oil Spills

14-17 June 1978, Keystone Lodge

Keystone, Colorado

STEERING COMMITTEE

Charles C. Bates (Chairman)	<i>U.S. Coast Guard</i>
Arthur J. Emery, Jr.	<i>Office of Naval Research</i>
Jack Gould	<i>American Petroleum Institute</i>
Helen McCammon	<i>Energy Research & Development Administration</i>
Paul Lefcourt	<i>U.S. Environmental Protection Agency</i>
Frank Monastero	<i>U.S. Bureau of Land Management</i>
Jean Snider	<i>National Oceanic & Atmospheric Administration</i>
Richard Trumbull	<i>American Institute of Biological Sciences</i>

In August 1976 the American Institute of Biological Sciences cosponsored with several federal agencies and other organizations the symposium "Sources, Effects and Sinks of Hydrocarbons in the Aquatic Environment." As a follow-on, the AIBS is planning a meeting to explore the assessment of ecological impacts of oil spills in the marine and estuarine environments. The conference, scheduled for 14-17 June 1978 in the Conference Center at Keystone, Colorado, will be conducted in two sessions with separate but interlocking formats.

One session will deal with in-depth studies (case histories) of the ecological impact of recent oil spills. Invited papers from government and private sector scientists directly involved in assessment of spill incidents such as *Argo Merchant*, *Bouchard 65*, *Ekofisk*, *Metula*, *Hawaiian Patriot*, *Sansinema*, and the *Nepco Barge in St. Lawrence Seaway* will provide the substance of the session.

The second session will be composed of contributed papers on recently completed research on the development of techniques, procedures, and information directly applicable to collection and interpretation of field data for evaluations of ecological impacts of oil spills in the following areas:

- WILDLIFE
- EXTREME CLIMATIC ZONES (ARCTIC AND TROPICAL)
- WATER COLUMN ORGANISMS
- BENTHIC ORGANISMS

The final portion of this session will cover the SOCIOECONOMIC and LEGAL aspects of oil spills.

For further information about the conference and procedures for submitting a paper for the contributed paper session, contact Elizabeth Israeli, American Institute of Biological Sciences, 1401 Wilson Blvd., Arlington, VA 22209; phone (703) 527-6776.

PROGRAMS

ANATOMY GRADUATE PROGRAM TEXAS TECH UNIVERSITY

The Department of Anatomy provides graduate programs leading to the M.S. and Ph.D. degrees. Research areas include: developmental and reproductive biology, mineralized tissues, and neurobiology. Deadline: 31 March. Address correspondence to: Dr. David L. Bolender, Department of Anatomy, Texas Tech University School of Medicine, P.O. Box 4569, Lubbock, Texas 79409.

ASSISTANTSHIPS

GRADUATE ASSISTANTSHIPS are available for study in beautiful Hawaii. Full complement of latest research instrumentation. Twenty-two faculty members are conducting research in analytical, inorganic, organic, and physical chemistry, and many include studies which utilize Hawaii's unique volcanic and marine environment. Apply before 1 March to: Graduate Selection Committee, Department of Chemistry, University of Hawaii, Honolulu, Hawaii 96822. An Equal Opportunity Employer.

PREDOCTORAL ASSISTANTSHIPS IN ANATOMY

Qualified students are invited to apply for graduate study leading to the Ph.D. degree in anatomy with specialization in cell biology, neurobiology, developmental biology, or functional morphology. Stipends are available as teaching assistantships and tuition waivers. For application forms and further information write to: Chairman, Graduate Studies Committee, Department of Anatomy, University of Illinois at the Medical Center, Box 6998, Chicago, Illinois 60680.

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FELLOWSHIPS

TWO POSTDOCTORAL FELLOWSHIPS IN THE EARTH AND PLANETARY SCIENCES

The Lamont-Doherty Geological Observatory of Columbia University invites scientists interested in any field of the earth and planetary sciences to apply for the following fellowships.

Two postdoctoral fellowships, each awarded for a period of 1 year (extendable to 2 years in special instances) beginning in September 1978, with a stipend of \$13,500 per annum. Completed applications are to be returned by 15 February 1978. Application forms may be obtained by writing to: the Administrator, Lamont-Doherty Geological Observatory, Palisades, New York, 10964.

Award announcements will be made 31 March 1978.

CARDIOVASCULAR RESEARCH FELLOWSHIP. Postdoctoral fellowship position for research training in:

- 1) Physiology, pathophysiology, and pharmacology of cardiac and skeletal muscle.
- 2) Reflex control of the circulation.
- 3) X-ray videometry; clinical and basic ultrasound; 3-dimensional reconstruction.
- 4) Atherosclerosis; platelet inhibitors; hypertension; and
- 5) Computer applications in clinical cardiology.

Position available beginning 1 July 1978 for candidates with M.D. or Ph.D.; stipend \$12,600 and up, depending on experience. May combine with advanced clinical training in cardiovascular medicine. Contact: Robert G. Tancredi, M.D., Director, Cardiovascular Research Training Program, Mayo Clinic, 200 First Street, SW, Rochester, Minn. 55901; telephone: 507-282-2511.

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POSTDOCTORAL FELLOWSHIP IN HUMAN BIOCHEMICAL GENETICS available immediately for Ph.D. or M.D. to collaborate in the study of cats as models for human Gm₂ gangliosidosis. Research deals with molecular pathology, genetic control, complementation, and enzyme replacement. Experience in cell culture, lysosomal enzymes, and electron microscopy desirable. Résumé and three references to: Mario C. Rattazzi, M.D., Human Genetics, Department of Pediatrics (State University of New York at Buffalo), Children's Hospital, 86 Hodge Avenue, Buffalo, New York 14222. An Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

SUMMER RESEARCH FELLOWSHIPS FOR BLACKS AND OTHER MINORITIES AT THE MARINE BIOLOGICAL LABORATORY (MBL)

The Josiah Macy, Jr. Foundation has provided funds to defray laboratory fees and housing costs (up to \$4500 per person) for teachers who wish to improve their research and teaching abilities during summer 1978, either through independent study or research in collaboration with a staff member or another visiting scientist. Special attention is to be given to needs of faculty members of 4-year black colleges, who will be designated Macy Scholars. Applications must be completed by 1 February 1978. For applications and information, write: the Admissions Office, Marine Biological Laboratory, Woods Hole, Mass. 02543, specifying the Macy Program. MBL admits investigators of any race, color, and national or ethnic origin.

BIOCHEMISTRY POSTDOCTORAL RESEARCH FELLOW

Applications are invited from suitably qualified candidates to undertake research on connective tissue biochemistry. Experience in either collagen chemistry or immunochemistry would be desirable. The fellowship is for at least one year and is to commence 1 April 1978. Salary will be \$11,600 in the first year.

Applications to be made to: D. J. Carmichael, Department of Oral Biology, University of Alberta, Edmonton, Alberta, Canada T6G 2N8.

POSTDOCTORAL FELLOWSHIPS available to study the regulation of biogenic amine metabolism and its relationship to normal and abnormal behavior. Applicants should have a M.D. or Ph.D. and a background in biochemistry, neurology, or behavioral disorders. Send curriculum vitae and three letters of recommendation to: Dr. Michael J. Zigmond or Dr. Edward M. Stricker, Departments of Biological Sciences and Psychology, University of Pittsburgh, Pittsburgh, Pa. 15260. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS are available in the Department of Molecular Biology and Biochemistry at the University of California, Irvine. These fellowships are available for 1 or 2 years, studying under the sponsorship of the following faculty members:

R. Davis: enzymology, genetics, and metabolism in *Neurospora*; G. A. Granger: cell and molecular mechanisms operative in cellular immunity; B. A. Hamkalo: eukaryotic chromosome structure and function; S. Hayes: gene regulation and replication; J. E. Manning: gene sequence organization in eukaryote DNA, electron microscopy; C. S. McLaughlin: biochemical genetics of RNA and protein synthesis; W. D. Nunn: regulation of membrane lipid metabolism, genetic approaches; W. M. Stanley, Jr.: protein biosynthesis in eukaryotic cells; K. K. Tewari: nucleic acids of chloroplasts and other organelles; E. K. Wagner: nucleic acids and molecular biology of herpesvirus replication; R. C. Warner: mechanism of genetic recombination; C. A. Woolfolk: general microbiology, enzymology; and D. L. Wulff: genetic regulatory mechanisms.

For further information contact the individual faculty member or write to: Yvonne Gilbert, The Department of Molecular Biology and Biochemistry, University of California, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL CLINICAL RESEARCH FELLOWSHIP for M.D. or Ph.D. to join multidisciplinary group studying neuropharmacological and developmental aspects of childhood autism. Candidates interested in child psychiatry, neuropharmacology, or psycholinguistics are especially welcome. Stipend to \$14,000. Two years; starting July 1978. Send curriculum vitae and names of three references to: Donald J. Cohen, M.D., Child Study Center, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP

Position available in area of developmental neurobiology, with research focused on morphological studies of abnormal brain development. Experience in electron microscopy desirable. Send curriculum vitae and names of three references to:

Dr. Ian S. Zagon
Department of Anatomy
The Milton S. Hershey Medical Center
Hershey, Pa. 17033

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For further information write: Claudia Kraft, Psychobiology Program, 446 Crawford Hall, University of Pittsburgh, Pittsburgh, Pa. 15260.

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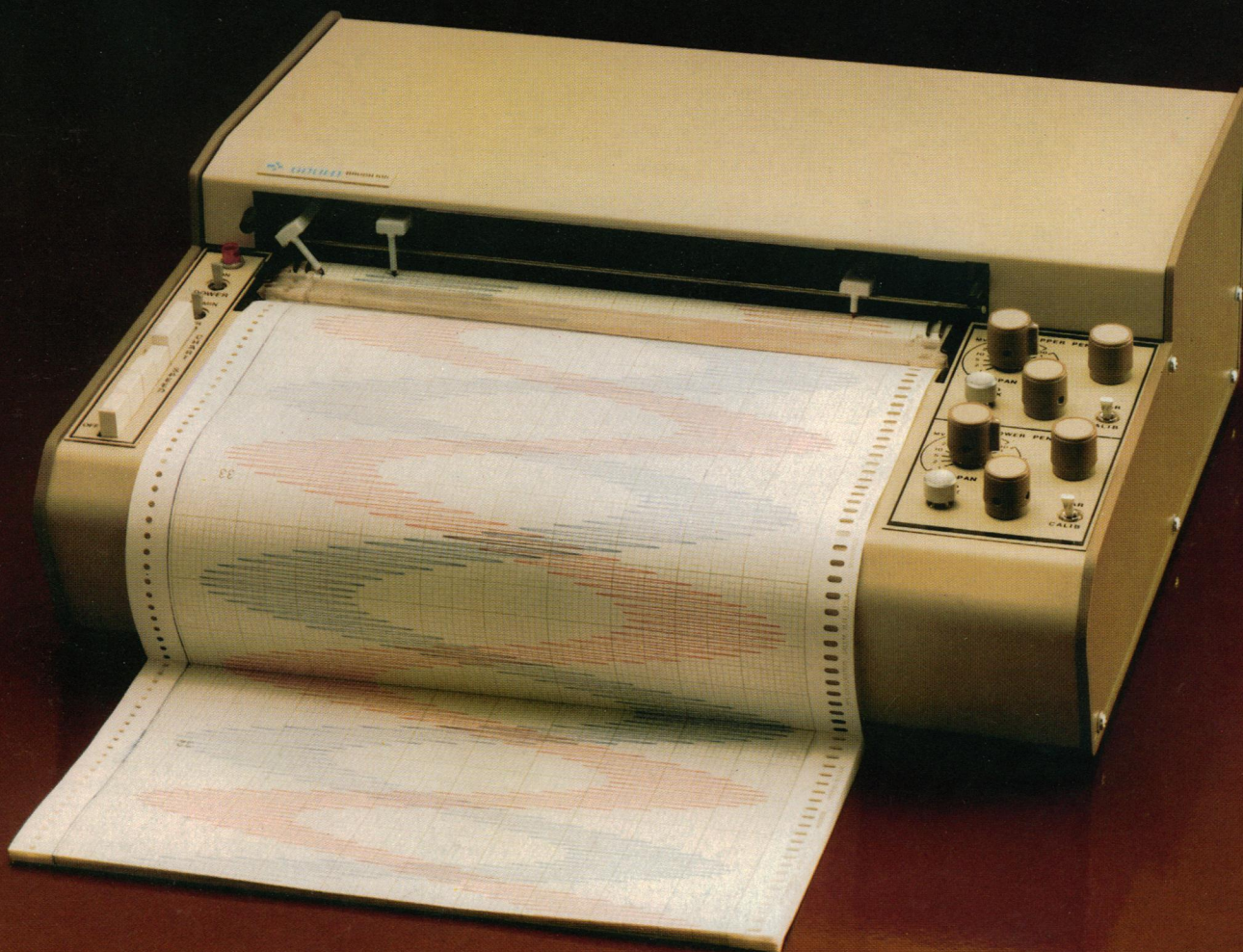
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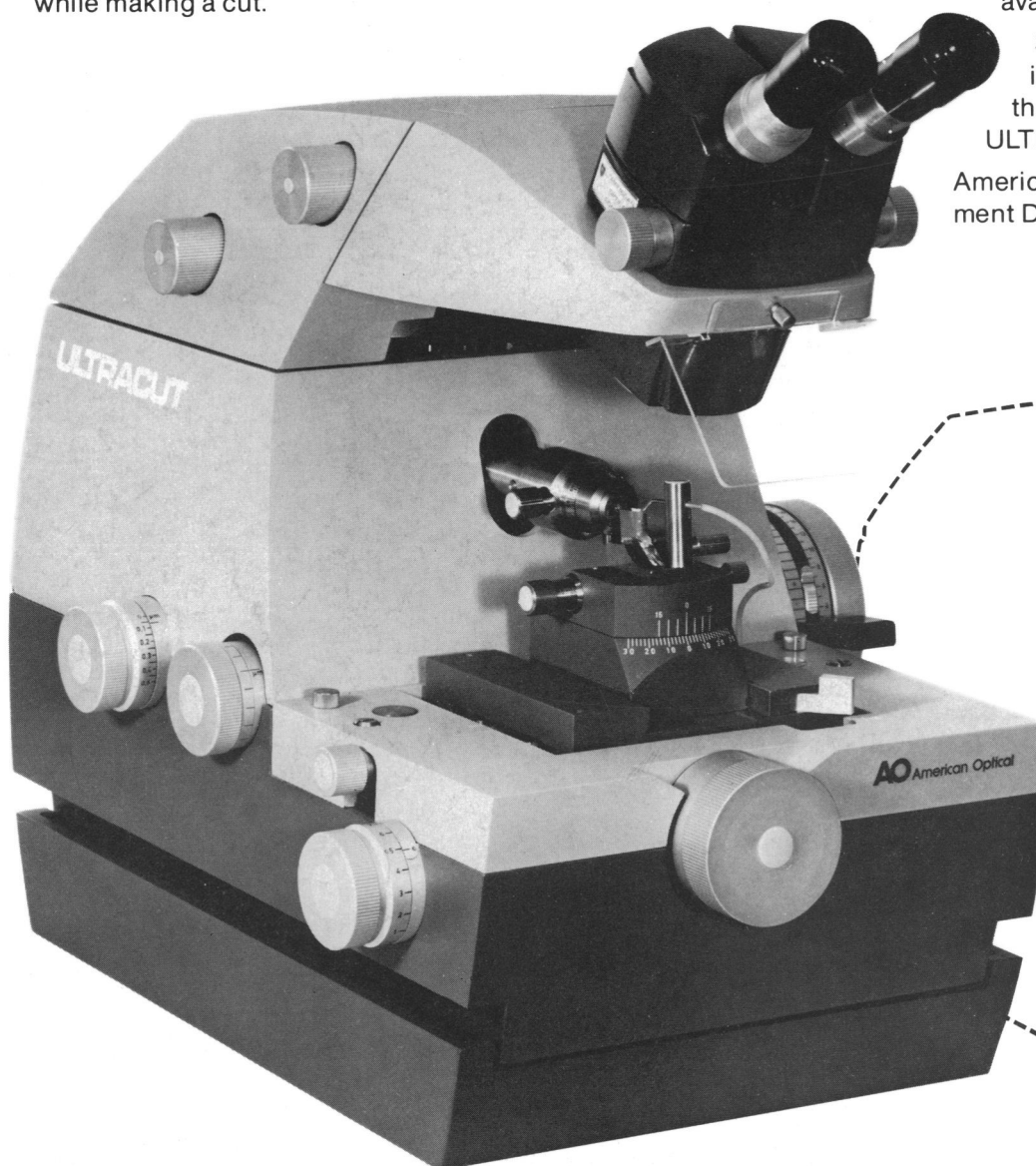
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