

ideas that andesite is derived from basalt by crystallization, principally of plagioclase, olivine, augite, and magnetite, still have the most merit and best explain most features of most andesites. Other processes, such as melting of wet mantle peridotite, melting of crustal rocks, contamination by crustal rocks, magma mixing, liquid immiscibility, vapor fractionation, and diffusion, play minor or local roles. The special roles of plate subduction in the generation of orogenic andesites in their typical place is to provide a source of incompatible and radiogenic elements, silica, and water for the fluxing of melting and the production of appropriate parental magmas in the overlying wedge of hot mantle. Gill's book thus concludes that the processes that produce the variable features of orogenic andesites are more complex than those that generate either granites or basalts.

All earth scientists and students interested in the origins of the crust, the significance of volcanism, and the plate tectonic cycle will benefit greatly from this book, whether they read it or not.

ALFRED T. ANDERSON, JR.

Department of the Geophysical Sciences, University of Chicago, Chicago, Illinois 60637

Books Received

Assessment Centers and Managerial Performance. George C. Thornton, III, and William C. Byham. Academic Press, New York, 1982. xii, 458 pp., illus. \$39.

Assessment of Immune Status by the Leukocyte Adherence Inhibition Test. D. M. P. Thomson, Ed. Academic Press, New York, 1982. xviii, 380 pp., illus. \$45.

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A BASIC Programmer's Guide to Pascal. Mark J. Borgerson. Wiley, New York, 1982. viii, 118 pp. Paper, \$9.95.

Biological Carcinogenesis. Papers from a workshop, Detroit. Marvin A. Rich and Philip Furmanski, Eds. Dekker, New York, 1982. x, 310 pp., illus. \$49.50.

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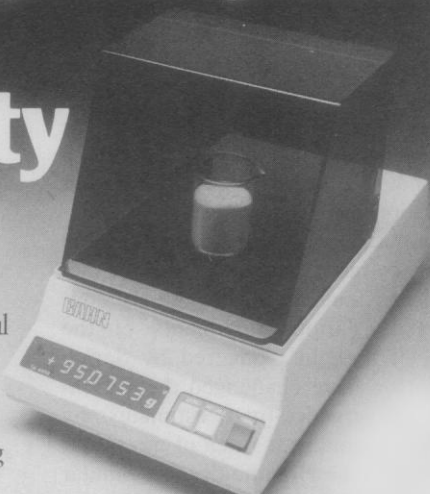
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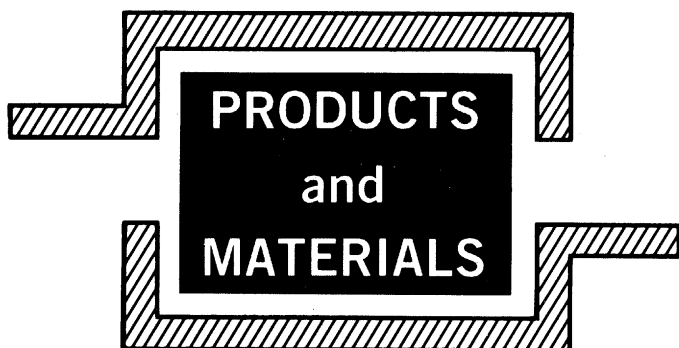
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Literature

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Microcomputer Products features systems, peripherals, board products, and software. Cromemco. Circle 580.

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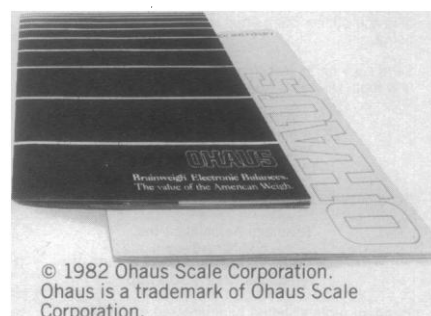
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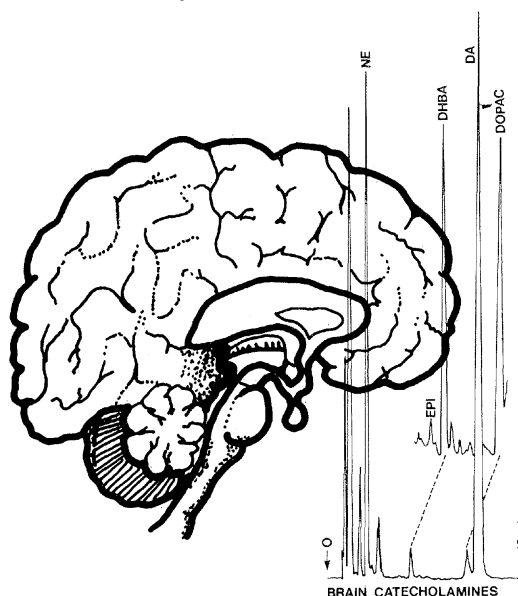
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Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

Effective 1 January 1983, the display rate for SCIENCE will be \$9.80 per millimeter, with a minimum charge of \$245 for 25 millimeters.

POSITIONS WANTED

Aquatic Biologist. M.S., benthos specialist, certified fisheries scientist; 11 years of consulting experience; technical and administrative expertise. Any position considered; prefers Midwest, but will relocate. Box 321, SCIENCE. 12/10, 17, 24; 1/7

Attorney—Bioscientist. J.D. December 1982, ABD biophysics/physical biochemistry, B.A. chemistry, registered patent agent. Science background: biochemistry, molecular biology, biophysics, advanced instrumental methods, computing. Elective legal study: law of administrative regulatory agencies, government contracts, patents, copyrights, trade secrets, and the FDA. Trained in science and law. I recognize problems and concerns of both areas and desire opportunity, where a knowledgeable interface is needed, to provide scientific community with competent legal representation. Contact: LAW, 1414 Morstein Road, West Chester, Pa. 19380. X

Biochemical Pharmacologist. Ph.D., 1971; mechanism of action of drugs on calmodulin and microtubules. Also some experience in hypnotics, narcotic drugs, hormone, RIA, and enzymology. Seeks research position in industry/academic research institute. Salary negotiable. Box 313, SCIENCE. X

Biochemist. Ph.D., 1969; research background in hormonal/drug regulation, biotransformation, toxicology; many publications; graduate level teaching; computer applications experience. Seeking academic/research/management/industrial position. Box 324, SCIENCE. 12/10, 17

POSITIONS WANTED

Biochemist. Ph.D. MT(ASCP). Ten years in clinical laboratories. Supervisory, management, and teaching experience. Seeking supervisory position in medical laboratory and/or teaching position in biochemistry/medical technology. North central, northwestern, Rocky Mountain regions preferred. Box 317, SCIENCE. 12/10, 17

Clinical Immunologist. Ph.D. 1979. Desires to direct clinical laboratory, teach, research. ABMLI eligible. Clinical expertise; serology, quantitative and qualitative T, B, and macrophage cell testing, immunoglobulinopathy determinations, paternity, histocompatibility, immunoassays, FANA, leukemia markers, TORCH testing. Research expertise; tumor immunobiology (NK, monocytes) and hybridoma. Box 325, SCIENCE. X

Information Scientist/Editor/Writer. B.S. chemistry (1964), M.B.A. (1980). Industrial experience searching, monitoring, and reviewing literature, patents on biotechnology, chemical, microbiological, biochemical, fermentation, medical, and business subjects. Excellent writing skills. Editing experience. Can operate Dialog. Will relocate. Box 323, SCIENCE. X

Molecular Biologist. Ph.D. in biochemistry. Ten years of experience in regulatory mechanisms of *Escherichia coli* and two-dimension electrophoresis of proteins. Doctoral work on nucleic acid metabolism in rats. Wide range of analytical techniques. Experienced in personnel training and laboratory management. Box 322, SCIENCE. 12/10, 17

Plant Pathologist. Ph.D. 1982. Minor: plant breeding, statistics. M.S. in agronomy. Practical experience with several cereal crops and diseases (field and greenhouse) and pesticide testing. Seeks research, administration, or teaching position in academia or industry. Box 326, SCIENCE. X

Toxicologist. Board-certified, Ph.D. 1973. Multi-million dollar industrial toxicology research administration (protocol design, report review, contract monitoring, GLP's, and so forth). Knowledgeable in product safety evaluations. Experience with government agencies, trade associations, and contract laboratories. Good communication skills and managerial background. Box 327, SCIENCE. X

POSITIONS OPEN

ADJUNCT ASSISTANT PROFESSOR, the Department of Medicine, University of California, San Francisco (UCSF). Position available immediately to study the biochemistry, immunology, and pathology of herpes simplex virus (HSV). A Ph.D. in virology with postdoctoral experience in neurovirology essential. Experience with HSV glycoproteins, monoclonal antibodies, restriction endonuclease analysis of virus strains, recovery of HSV from human neural tissue, and animal models of virus infection desirable. Candidate will conduct independent and collaborative research projects on HSV and have major teaching responsibilities. Submit curriculum vitae, statement of research interests, and names of three references to: **Division of Infectious Diseases, San Francisco General Hospital, 1001 Potrero Street, San Francisco, Calif. 94110.** UCSF is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF MINNESOTA Tenure-track Assistant Professors

Two tenure-track assistant professor positions are available in the Department of Anatomy beginning as early as 1 July 1983. Applicants must have postdoctoral experience, demonstrated research productivity, and training in gross anatomy. Applicants will be assessed on three major criteria: teaching ability; strength of research program; and research that complements ongoing departmental research interests in cell biology, reproductive biology, neurobiology, or endocrinology. Teaching responsibilities will include gross anatomy (for dental or medical students) and graduate teaching in the area of specialty. Curriculum vitae, brief statement of research interests and goals, reprints of publications, and names of three referees must be received by 15 January 1983, and should be addressed to: **Search Committee, Department of Anatomy, University of Minnesota, 4-135 Jackson Hall, 321 Church Street, SE, Minneapolis, Minn. 55455.**

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

POSITIONS OPEN

ANIMAL BEHAVIOR

The Department of Ecology and Behavioral Biology, **University of Minnesota**, invites applications for a tenure-track faculty position to do research and to teach graduate courses in the mechanisms, ontogeny, or ecology of behavior, and to teach an undergraduate course in general zoology, in a department strongly oriented toward ecology and evolution. A Ph.D. in behavior is required, and 1 year of postdoctoral experience is desired but not mandatory. The position begins 16 September 1983. Applications will be accepted until 31 January 1983. Applications should include curriculum vitae, copies of publications, a statement of research and teaching interests, transcripts, and three letters of reference (sent separately). Respond to: **Dr. Richard E. Phillips, Department of Ecology and Behavioral Biology, Room 109 Zoology Building, 318 Church Street, SE, Minneapolis, Minn. 55455; telephone: 612-376-5672.**

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

APPLIED PSYCHOLOGIST: Assistant or associate professor, tenure-track; begin 15 August 1983. Responsibilities include teaching graduate and undergraduate courses in applied and industrial (two course load) plus an appropriate research program and involvement in joint program with Business School. Send curriculum vitae and three letters of reference to: **Applied Search Committee, Psychology Department, 210 McAlester Hall, University of Missouri, Columbia, Mo. 65211.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT EDITOR, The Physical Review—To assist the editor (*Physical Review B, Condensed Matter Physics*) in processing manuscripts for publication. Condensed matter physics background at the Ph.D. level required. Address inquiries to: **Deputy Editor-in-Chief, The Physical Review, Box 1000, Ridge, N.Y. 11961.**

The Department of Anatomy, Southeastern College of Osteopathic Medicine (SECOM), invites applications for the position of **ASSISTANT PROFESSOR OF ANATOMY**, effective July 1983. Candidates must have a Ph.D. degree and be competent to teach human histology and/or gross anatomy. Applicants should submit curriculum vitae, references, and statement of teaching experience by 1 February to: **F. H. Higginbotham, Ph.D., Chairman, SECOM, 1750 North East 168 Street, North Miami Beach, Fla. 33162.**

ASSISTANT PROFESSOR—BIOCHEMISTRY

The Department of Biochemistry at the University of Pittsburgh School of Medicine invites applications for a tenure-track position to be filled effective 1 July 1983. Preference will be given to candidates with experience in recombinant DNA techniques and an interest in pursuing problems in eukaryotic molecular biology. However, highly qualified individuals in other areas of biochemistry will be considered. Applicants must have at least 2 years of postdoctoral experience, a demonstrated research ability, and a commitment to excellence in teaching medical and graduate students. The successful candidate is expected to develop a productive research program with external funding. Send curriculum vitae, an outline of research interests, and the names of three references by 15 February 1983 to: **Dr. Norman P. Curthoys, Department of Biochemistry, University of Pittsburgh School of Medicine, Pittsburgh, Pa. 15261.** An Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF PENNSYLVANIA DEPARTMENT OF MEDICINE

The Cardiovascular-Pulmonary Division seeks an **ASSISTANT PROFESSOR OF MEDICINE:**

Board-qualified or -certified in pulmonary medicine with particular interest in clinical disorders of the control of breathing. Research to be conducted both on animals and on man in ventilatory control. Background of research experience in control of breathing essential.

Available 1 July 1983. Salary commensurate with experience. *University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer, M/F.*

Send reply to: **Michael McNicholas, Cardiovascular-Pulmonary Division, Department of Medicine, Hospital of the University of Pennsylvania, 874 Maloney Building, 3600 Spruce Street, Philadelphia, Pa. 19104.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY (tenure-track) to begin September 1983. To participate in undergraduate and graduate teaching program and to initiate a high quality research program. Applicants should have research experience in plant biochemistry, particularly in the area of gene structure, function, and transcriptional and translational regulation. The successful candidate will have a joint appointment with the New Hampshire Agricultural Experiment Station. Qualifications: Ph.D. and post-doctoral experience. Send curriculum vitae, statement of research interests, and names of three references by 21 January 1983 to: **Dr. James A. Stewart, Chairman, Biochemistry, Spaulding Hall, University of New Hampshire, Durham, N.H. 03824.** *University of New Hampshire is an Affirmative Action/Equal Opportunity Employer.*

THE EPPLEY INSTITUTE FOR RESEARCH ON CANCER AND ALLIED DISEASES ASSISTANT PROFESSORS CANCER RESEARCH

The Eppley Institute for Research on Cancer and Allied Diseases of the University of Nebraska Medical Center invites applications for three tenure-track faculty positions. Appointments will be made at the assistant professor level with a secondary position in one of the basic science departments. Successful candidates will have a doctoral degree and at least 2 years of relevant postdoctoral training in **cancer cell biology or in molecular biology**. Candidates must be able to develop and maintain an independent research program as well as to interact in a collaborative way with other faculty members. The facilities at Eppley are excellent and the salary is competitive. Interested applicants should forward, no later than 31 December 1982, curriculum vitae, a list of publications, the names of three references, and a one-page statement of the research interests to be pursued to: **Director, Eppley Institute for Research on Cancer and Allied Diseases, 42nd and Dewey Avenue, Omaha, Nebraska 68105.**

The University of Nebraska Medical Center is an Equal Opportunity Employer.

THE UNIVERSITY OF NORTH CAROLINA, School of Public Health, Department of Environmental Sciences and Engineering, is seeking an **ASSISTANT/ASSOCIATE PROFESSOR OF INDUSTRIAL HYGIENE**. This is a tenure-track position and will involve teaching, guidance of graduate students, a strong self-generated and cooperative research activity, and involvement in all academic activities of the department. Doctoral degree in, or related to, industrial health, some work experience, and a strong interest in research are desired. Send résumé and a statement of research interests by 1 February 1983 to: **Robert L. Harris, Ph.D., Professor of Environmental Engineering, School of Public Health, University of North Carolina, Chapel Hill, N.C. 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR—MICROBIOLOGY

A tenure-track position is available for a candidate who has demonstrated significant potential for research and who has competence in the teaching of medical and graduate students. Initial support is available for establishing a laboratory. St. Louis has an active scientific community and attractive cultural and physical environment. A completed application should include a résumé, a statement of research accomplishments, future plans, and the names of three references. To assure consideration, apply by 15 January 1983 to: **Dr. Arnold Kaplan, Chairman of the Search Committee, Department of Microbiology, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Missouri 63104.** *An Equal Opportunity/Affirmative Action Employer, M/F/H.*

The Scripps Institution of Oceanography invites applications for the position of **ASSISTANT RESEARCH CHEMIST** (\$22,900 to \$30,100). Candidate should have a Ph.D. (or equivalent) in marine chemistry and should have research experience related to the solution chemistry of sea water. Principal research areas include the modeling of chemical speciation, and the application of techniques such as E.M.F. and acoustic absorption to the study of chemical speciation.

Send curriculum vitae and names of references by 31 December 1982 to: **Professor K. M. Watson, Director, Marine Physical Laboratory, Scripps Institution of Oceanography, University of California, San Diego, Calif. 92152.**

The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHYSICS The University of Akron

Applications are invited for a physics faculty position at the level of assistant professor. Appointment will begin in fall 1983. The Ph.D. is required; salary is commensurate with background and qualifications. Solid-state or polymer physics research interests are preferred. Theorists or experimentalists with backgrounds in NMR, electron-tunneling, computer physics, or polymer-related areas will be of particular interest. Expertise in applications of computers to physics research and teaching, with an interest in developing undergraduate and graduate programs in computer physics, would be very desirable. Please send current résumé, plus names and addresses of four references, by 31 January 1983 to: **Dr. Roger B. Creel, Chairman of Search Committee, Department of Physics, The University of Akron, Akron, Ohio 44325.** *The University of Akron is an Equal Education and Employment Institution.*

ASSISTANT RESEARCH PHYSIOLOGIST

Postdoctoral position to study lung fluid balance in fetal and newborn animals. Applicants must have prior training and experience in microvascular surgery and be familiar with micropuncture techniques. Knowledge of fetal and newborn physiology essential. Salary: \$22,900 per year. Please send curriculum vitae and names of three references with their telephone numbers to: **Richard D. Bland, M.D., 1315-Moffitt Hospital, University of California, San Francisco, San Francisco, Calif. 94143.** *The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSOCIATE CHIEF OF STAFF FOR RESEARCH AND DEVELOPMENT applications are invited at the Veterans Administration Medical Center, Kansas City, Missouri.

Candidates should be established M.D. investigators who have a record of meritorious research, have been highly successful in competing for research funding, and are actively engaged in a substantial ongoing research program. Candidates to head this \$3-million program with 150 employees should have prior administrative experience and will be expected to provide dynamic leadership in the continuing development of research programs.

Joint appointments will be given at the Veterans Administration Medical Center and the appropriate department at the University of Kansas College of Health Sciences and Hospital.

Respond with curriculum vitae and three references to: **James A. Kennedy, M.D., Chairman, Search Committee, Veterans Administration Medical Center, 4801 Linwood Boulevard, Kansas City, Mo. 64128.**

An Equal Opportunity Employer

CAREER SCIENTIST

The Department of Microbiology, University of Alberta, invites applications by senior researchers for a position as a career scientist. The appointment will be normally made at full professor level (current floor: \$46,010) and the successful applicant will enjoy the academic privileges of this rank. Candidates must have a distinguished research background in the area of health science-oriented applied microbiology and have established an international reputation in their field of research. The position will depend upon successful application for a competitive award from a major funding foundation. Applications, including curriculum vitae and outlines of research interest, should be addressed to: **Dr. D. W. S. Westlake, Chairman, Department of Microbiology, Faculty of Science, The University of Alberta, Edmonton, Alberta, Canada T6G 2E9.**

Closing date: 10 January 1983. *The University of Alberta is an Equal Opportunity Employer.*

DEAN College of Arts and Sciences University of Nebraska-Lincoln

Nominations and applications are being accepted until 31 December for dean of College of Arts and Sciences. The dean serves as the chief academic and budget officer of the college which enrolls nearly 5,000 undergraduate and 1,000 graduate majors in natural sciences, social sciences, humanities, and the arts. Complete job description and requirements available by contacting: **Affirmative Action Office, University of Nebraska-Lincoln, 504 Administration Building, Lincoln, Neb. 68588-0437. Telephone: 402-472-3417.** *Affirmative Action/Equal Opportunity Employer.*

BLOOMSBURG STATE COLLEGE Bloomsburg, Pennsylvania

Three positions available beginning with academic year 1983-1984.

- 1) **ANIMAL PHYSIOLOGY.** Assistant professor, tenure-track. Primary responsibilities: to teach undergraduate and graduate physiology courses, including anatomy and physiology, and supervise undergraduate and graduate research. Our 16-member department emphasizes teaching excellence; laboratory research facilities and space are limited, but good opportunities exist for field work. Ph.D. required. Send letters of application, résumé, transcripts, and three letters of reference postmarked by 15 January 1983 to: **Dr. Mark Melnychuk, Co-Chairperson, Search Committee, Department of Biological and Allied Health Sciences, Bloomsburg State College, Bloomsburg, Pa. 17815.** *Equal Opportunity/Affirmative Action Employer.*
- 2) **HUMAN SEXUALITY.** Nontenure, renewable. Rank and salary commensurate with qualifications. Primary responsibilities: to teach undergraduate courses in human sexuality. Experience and interest in some aspects of health care is desirable. Minimum of a master's degree. Send letters of application, résumé, transcripts, and three letters of reference postmarked by 15 January 1983 to: **Professor John Fletcher, Co-Chairperson, Search Committee, Department of Biological and Allied Health Sciences, Bloomsburg State College, Bloomsburg, Pa. 17815.** *Equal Opportunity/Affirmative Action Employer.*
- 3) **GENETICS.** Sabbatical replacement for 1983-1984. Primary responsibility is to teach general genetics using *Drosophila* in the laboratory, and other course(s) assigned. Minimum of a master's degree. Send letters of application, résumé, transcripts, and three letters of reference postmarked by 15 January 1983 to: **Professor John Fletcher, Co-Chairperson, Search Committee, Department of Biological and Allied Health Sciences, Bloomsburg State College, Bloomsburg, Pa. 17815.** *Equal Opportunity/Affirmative Action Employer.*

THE BROOKINGS INSTITUTION FELLOWSHIPS IN SCIENCE, ENGINEERING, AND PUBLIC POLICY 1983-1984

The Brookings Institution's Fellowships in Science and Public Policy bring three senior scientists and engineers to Washington for a year to increase their understanding of public policy and to contribute to the policy dialogue.

Fellows choose their own full-time research agendas, and can begin residence at Brookings between 1 July and 30 December 1983.

ELIGIBILITY AND CRITERIA

Candidates will be chosen from the physical, natural, biological, and engineering sciences, and must be nominated by department heads, deans, institutes or laboratory directors at universities, nonprofit research institutions, industrial and government laboratories. Candidates should normally be full professors or equivalent level, but younger candidates with exceptional promise are considered. Fellows are selected based on their stature in their own field, and their prior interest and concern with public policy.

SALARY AND BENEFITS

Brookings provides an amount equivalent to the Fellow's annual salary at his or her institution (normally up to \$50,000) and fringe benefits.

APPLICATION PROCEDURES

Nominations of candidates are invited from medical schools, science and engineering facilities, government laboratories, nonprofit research institutions, and the industrial sector.

Nominating letters, preferably accompanied by the candidate's application form, should be received by 15 January 1983. Nominations, requests for application forms, and inquiries should be addressed to:

**A. Lee Fritschler, Director
Advanced Study Program
The Brookings Institution
1775 Massachusetts Avenue, NW
Washington, D.C. 20036**

POSITIONS OPEN

BIOLOGY OPENINGS

The Biology Department at Skidmore College anticipates three tenure-track positions to begin September 1983 at the assistant professor level (although one may be at the associate professor level if warranted by experience and qualifications). Applicants must have the doctorate and be able to teach one course from among: genetics, invertebrate physiology, and plant physiology; and at least two other courses from the following: animal behavior, botany, ecology, evolution, histology, invertebrate zoology, and plant ecology. Other responsibilities may include: (i) participation in introductory team-taught courses, (ii) supervision of senior research projects, and (iii) development of courses related to the applicant's research specialties. Applicants should indicate preferred courses and send curriculum vitae, transcripts, and three letters of recommendation by 24 January to:

Elaine Rubenstein, Chairperson
Biology Department
Skidmore College
Saratoga Springs, N.Y. 12866

Affirmative Action/Equal Opportunity Employer

BIOMATERIALS—UTAH: Experienced M.S. or Ph.D. level materials scientist or chemist to work on synthetic polymers as ophthalmologic implants. Send résumé, publications list, copies of appropriate papers, and three or more letters of recommendation to: **Biomaterials International, Inc., P.O. Box 8852, Salt Lake City, Utah 84108; telephone: 801-583-8444.**

CELL PHYSIOLOGIST

University of Colorado
School of Medicine

The Department of Physiology has an opening at the assistant professor level. Appointment as associate professor may be considered for an exceptional candidate. Appointee will be expected to maintain an active research program in cell physiology and to teach medical students and dental students in a related area of organ system physiology. Candidates preferred with an interest in endocrine cell function, membrane transport in epithelial or other cells, properties of excitable membranes, neurobiology, or cell morphology related to function. Minimum of 2 years of postdoctoral experience. Starting date: 1 July 1983 or later. Submit curriculum vitae, including details of teaching experience, statement of research plans, and names of three referees, to: **Dr. A. R. Martin, Chairman, Department of Physiology, C240, University of Colorado School of Medicine, Denver, Colorado 80262. An Equal Opportunity/Affirmative Action Employer.**

CHEMISTRY TEACHING POSITION

Applications are invited for a full-time, tenure-track position at the assistant or associate professor level in the Department of Chemistry in the School of Science and Engineering at Seattle University beginning fall 1983. Applicants are expected to have the Ph.D. and must have demonstrated teaching excellence in some combination of the fields of analytical/instrumental analysis, biochemistry, and clinical chemistry, and must have the ability and commitment to direct undergraduate research. Experience related to computer/instrumentation interfacing and a background in teaching general chemistry will strengthen the application. Applicants should submit résumés and transcripts, along with the names and addresses of three references, to: **Dr. David L. Thorsell, Chairman, Department of Chemistry, Seattle University, Seattle, Wash. 98122.** Closing date for receipt of applications is 1 February 1983. *Seattle University is an Equal Opportunity/Affirmative Action Employer.*

MATHEMATICS TEACHING POSITION

Applications are invited for a probable full-time tenure-track position at the assistant or associate professor level in the Department of Mathematics in the School of Science and Engineering at Seattle University beginning fall 1983. Applicants are expected to have the Ph.D. in mathematics, proven teaching ability, and a strong commitment to teaching lower division service courses. Backgrounds in linear programming, operations research, and game theory will strengthen the application. Applicants should submit their résumé and transcript, along with names and addresses of three references, to: **Dr. Mary B. Ehlers, Chairman, Department of Mathematics, Seattle University, Seattle, Wash. 98122.** Closing date for the receipt of applications is 1 February 1983. *Seattle University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CELLULAR PHYSIOLOGIST. Teaching and research experience emphasized. For participation in current work on cell culture of transformed cells. Please apply to: **The Chairman, Physiology Department, Ponce School of Medicine, P.O. Box 7004, Ponce, P.R. 00732-7004.**

CLINICAL PHARMACOLOGIST

The Department of Pharmacology at the University of Rochester invites applications for a clinical pharmacologist at the rank of assistant professor. Applicants must have an M.D. or both M.D. and a Ph.D. in pharmacology or a closely related field and must be Board-eligible or -certified. Applicants should also have the potential to attract research support and to establish an independent research program as well as an interest in professional and graduate education. Applicants should forward curriculum vitae, a list of publications, three letters of reference, and a summary of current and future research interests to: **Dr. M. W. Anders, Department of Pharmacology, School of Medicine and Dentistry, University of Rochester, 601 Elmwood Avenue, Rochester, New York 14642. An Equal Opportunity Employer, M/F.**

DEVELOPMENT OFFICER. Eastern Virginia Medical School seeking scientist to work with individual faculty to obtain external funding. Immediate opening; requires minimum of M.S. in biological or chemical sciences, strong grammar, writing skills. Grant-writing experience desirable. Salary commensurate with experience; excellent benefits. Send résumé to: **Joe S. Greathouse, Jr., Vice President for Planning and Development, Eastern Virginia Medical Authority, P.O. Box 1980, Norfolk, Va. 23501. Affirmative Action/Equal Opportunity Employer.**

DIRECTOR THE ENVIRONMENTAL STUDIES INSTITUTE DREXEL UNIVERSITY PHILADELPHIA, PENNSYLVANIA

Drexel University invites nominations and applications for the position of **DIRECTOR** of the Environmental Studies Institute.

The Institute operates the Graduate Multidisciplinary Program in Environmental Engineering and Science with specialization in several areas including water quality, occupational health and safety, air pollution, environmental toxicology, hazardous wastes, and urban environmental problems. The director is responsible for operations of the Institute and the graduate program including faculty development, educational programs, and research programs.

Applicants for the position should have an earned doctorate degree in some field of engineering, science, public administration, or social science with a record of scholarly and academic achievement in one or more fields of environmental applications.

Applications and nominations should be sent before 15 January 1983 to:

Chair, Search Committee
Environmental Studies Institute
Drexel University
Philadelphia, Pa. 19104

Drexel University is an Equal Opportunity/Affirmative Action Employer.

ECOLOGIST—FIELD BIOLOGIST. Tenurable faculty position at the assistant professor level. Position is responsible for field program within the department including summer field trips. Ph.D. and demonstrated interest and success in teaching required. Emphasis on teaching, but research interest desirable. Send curriculum vitae, three letters of recommendation, and all transcripts by 1 February 1983 to:

Dr. James P. McKeown, Chairman
Department of Biology
Millsaps College
Jackson, Miss. 39210

EXPERIMENTAL POPULATION BIOLOGIST. The University of Iowa anticipates an opening for a tenure-track position at the level of assistant professor. Preference will be given to candidates holding the Ph.D. who are likely to develop a vigorous research program at the interface of experimental population ecology and genetics, physiology, or behavior. Teaching assignments are to be determined. Screening will begin no later than 1 February 1983. Curriculum vitae, statement of research interests, reprints, and the names of at least three references should be sent to: **Dr. Henry F. Howe, Ecology Search, Department of Zoology, University of Iowa, Iowa City, Iowa 52242-1368. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

DIAGNOSTIC RADIOLOGY: Position available. Candidate should have academic background to develop and implement clinical and research programs in a broad-based Radiology Department serving a comprehensive cancer center and community hospital, Philadelphia, Pennsylvania. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **Box 319, SCIENCE.**

DIAGNOSTIC RADIOLOGY, ANGIOGRAPHY-INTERVENTIONAL RADIOLOGY: Position available. Candidate should have special expertise in angiography and interventional radiology as well as an academic background to develop and implement clinical and research programs in a broad-based Radiology Department serving a comprehensive cancer center and community hospital, Philadelphia, Pennsylvania. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **Box 320, SCIENCE.**

The Department of Psychiatry and Human Behavior, University of California, Irvine, is seeking applicants for a position as an **ASSOCIATE/FULL PROFESSOR** to serve as **DIRECTOR OF THE PSYCHIATRIC RESEARCH UNIT** at the Long Beach Veterans Administration Hospital. Duties will include: teaching of medical students and residents, clinical care, and research. Applicants should have 3 to 4 years of experience in clinical psychobiology. Demonstrated research experience in psycho-neuroendocrinology or psychopharmacology and national recognition are particularly sought. Applicant must have a clinical background in the evaluation and treatment of all major psychiatric disorders. Prefer candidates with a minimum of 5 years of experience in the administration of inpatient/outpatient psychiatric units. Applicant must have current California medical licensure. Interested parties should send curriculum vitae and three references to:

Lawrence D. Sporty, M.D.
Clinical Professor and
Vice Chair, Clinical Services
University of California, Irvine Medical Center
101 City Drive South
Orange, California 92668

The University of California, Irvine, is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR OF ENERGY, ENVIRONMENT AND RESOURCES CENTER, THE UNIVERSITY OF TENNESSEE, KNOXVILLE. Qualifications include experience in solicitation and administration of grants, interest in policy and international issues, Ph.D. (or equivalent), and suitability for tenure in related academic department. Nomination and application deadline: 3 January 1983. Application must include résumé, names and addresses of three to five references, and statement of special qualifications for position. Nominations, applications, or inquiries should be addressed to: **Dr. Thomas L. Bell, Chairperson, EERC Search Committee, 404 Andy Holt Tower, The University of Tennessee, Knoxville, Tenn. 37996-0140.**

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

The Department of Internal Medicine of the University of Michigan Medical School is seeking a **DIVISION CHIEF IN ALLERGY.** This individual will be responsible for directing educational, research, and patient care activities within the division. Candidate should have a proven record of research and previous administrative experience. Address inquiries, including curriculum vitae, to: **W. N. Kelley, M.D., Chairman, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Mich. 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer.**

PULMONARY AND CRITICAL CARE MEDICINE ACADEMIC POSITION

The Pulmonary and Critical Care Medicine Division, Department of Internal Medicine, at the University of Michigan Medical School and Hospital, currently has an available faculty position. Candidates must have an M.D. degree, be Board-certified (or -eligible) in pulmonary medicine, and should have proven research potential. The person accepting this position will be actively involved in the care of respiratory and critical care patients, the teaching of students, house staff, and fellows, and extensive research (clinical or basic). Academic rank will be based upon credentials. Please respond to: **John G. Weg, M.D., Professor of Internal Medicine, University of Michigan Hospitals, 1405 East Ann Street, Ann Arbor, Michigan 48109.**

ASSISTANT OR ASSOCIATE PROFESSOR

— Tenure-track position available in the Department of Microbiology and Immunology, Bowman Gray School of Medicine. Applicants must have M.D. and/or Ph.D. in microbiology/immunology, biochemistry, or related area with accomplishments and with two years postdoctoral research in molecular and cellular immunology, immunogenetics, immunopathology, complement biology or biochemistry, cellular biology of macrophages or mast cells, or tumor immunology. A broad educational base in immunology is required for teaching graduate and medical students. Applicants should submit curriculum vitae, including: (i) at least three recent publications (ii) statement of teaching and research goals (iii) current and pending research support (iv) three reference letters to: **Dr. Charles E. McCall, Acting Chairman, Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** Wake Forest is an equal opportunity employer.

RENAL PHARMACOLOGIST (Senior Level) Pharmaceuticals R & D

Ph.D. in Pharmacology or Biochemistry, with demonstrated competence in isolated tissue studies and receptor theory. Knowledge and background in renal pharmacology and physiology advantageous.

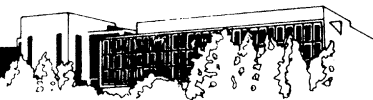
We are the U.S. subsidiary of ICI (UK) whose research introduced propranolol, clofibrate, tamoxifen citrate, and chlorhexidine. Last Fall we introduced atenolol, a unique cardioselective, once-a-day beta blocker.

One of the newest laboratories in the country in suburban campus setting 25 miles south of Philadelphia. Competitive salaries and benefits, including unique investment program. Moving expenses covered. Please submit full CV. Principals only.

Chas. T. Brodigan



STUART PHARMACEUTICALS
division of ICI Americas Inc
Wilmington, Delaware 19897
An Equal Opportunity Employer M/F



BIOCHEMISTRY PROFESSIONALS

Career Opportunities in Scientific Document Analysis

Openings are available for scientists to document the world's biochemical literature in concise and organized form. These are full-time, permanent positions offering an opportunity to make an important contribution to science by helping scientists around the world keep up with the latest developments in biochemistry and related fields such as pharmacology, immunochemistry, and microbiology.

We need individuals with academic training and/or experience in:

GENERAL BIOCHEMISTRY

PHARMACOLOGY

ENZYMOLGY (French or German reading knowledge required)

ANALYTICAL BIOCHEMISTRY (German or Japanese reading knowledge required)

IMMUNOCHEMISTRY (French or German reading knowledge required)

These positions will require relocation to our offices in Columbus, Ohio.

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LULEÅ UNIVERSITY OF TECHNOLOGY, SWEDEN

invites applications for

Chair of Economic Geology

Luleå University of Technology, established in 1971, is a vigorous university situated in north Sweden. The city of Luleå has excellent plane and train connections with Stockholm. The appointment is a tenure position within the Institute for Mineral Processing and Prospecting Technique in the Technical Faculty. The Institute has two other chairs, one in Mineral Processing and one in Applied Geophysics. The research programme for the chair in economic geology is to contain analysis and development of methods for the exploitation of geological formations of economic importance, especially for ore and industrial minerals. Geological and geochemical prospecting are important areas within the programme as also the use of theoretical and experimental models for ore genesis and related processes. The Department of Economic Geology has at present a staff of about 15 and excellent research facilities (plasma spectrograph, X-ray diffraction and fluorescence equipment, analytical laboratory, etc).

Candidates should have a strong record of research.

Salary is negotiable within certain limits.

Further information can be obtained from Professor D. S. Parasnis, Chairman, Institute of Mineral Processing and Prospecting Technique, S-951 87 Luleå, Sweden. Applications together with curriculum vitae and publications should be submitted in 4 copies to The Vice Chancellor's Office, Luleå University of Technology, S-951 87 Luleå, Sweden, before January 1, 1983.



TEKNISKA

HÖGSKOLAN I LULEÅ

LULEÅ UNIVERSITY OF TECHNOLOGY

POSITIONS OPEN

ENVIRONMENTAL PATHOLOGY. Pre- and post-doctoral positions available July 1983. Research emphasis is on cellular and molecular effects (mutagenesis, teratogenesis, biotransformation) of toxic chemicals (especially trace metals, aromatic hydrocarbons). Inquiries: **N. Karle Mottet, M.D., Program Director, Department of Pathology, SM-30, University of Washington, Seattle, Wash. 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

EUKARYOTIC MOLECULAR GENETICIST

The Department of Biology, University of California, Riverside, seeks an eukaryotic molecular geneticist for a tenure-track position starting 1 July 1983. Appointment will be at the assistant professor level. Preference will be given to a geneticist interested in the structure, evolution, and/or regulation of eukaryotic genomes. The successful applicant will be expected to develop a vigorous research program, supervise graduate students in master's and doctoral programs, and teach at both the undergraduate and graduate levels. Postdoctoral experience is highly desirable. Applicants should send curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and at least three letters of reference to:

**Professor Vaughan Shoemaker, Chairman
Department of Biology
University of California
Riverside, California 92521**

The University of California is an Equal Opportunity/Affirmative Action Employer. Applications are invited from all qualified individuals.

FACULTY POSITION—VISION SCIENCE beginning in the 1983 academic year. Responsibilities include teaching didactic and laboratory courses emphasizing the sensory aspects of vision (functional properties of rods and cones, spectral sensitivity, spatial and temporal aspects of vision). Background in color vision is desirable. Opportunity exists to conduct individual and joint research. Please send curriculum vitae to: **Dr. John Carter, Faculty Search Committee, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.**

FACULTY POSITION IN CELL BIOLOGY. The Department of Zoology, University of Iowa, invites applications for an anticipated tenure-track position at the assistant professor level. Research interests should be in the molecular aspects of eukaryotic cell structure and function. Teaching duties will include a basic course in cell biology and an upper level specialty course. Postdoctoral training is a prerequisite. Please send curriculum vitae, a brief statement of research interests, reprints, and the names of three references to: **Dr. David R. Soll, Department of Zoology, University of Iowa, Iowa City, Iowa 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—CHEMISTRY. Tenure-track. Teaching responsibilities include general chemistry, organic chemistry, an advanced course in biochemistry or environmental chemistry, opportunity to supervise undergraduate research. Ph.D., teaching experience required. Simon's Rock is an early entrance, liberal arts college with strong emphasis on quality teaching. Send curriculum vitae, two letters of recommendation, and a statement of approach to science education to: **Dr. T. Sorger, Science Division, Simon's Rock of Bard College, Great Barrington, Mass. 01230.** *Affirmative Action/Equal Opportunity Employer.*

LECTURER

The Department of Biology, University of California, San Diego, invites applications for a temporary position of lecturer. The starting 9-month salary is \$18,552, to be paid in 12 equal installments. This appointment is for 1 year beginning in September 1983, and possibly renewable at the end of the first year. Applicants must have Ph.D., and university teaching experience is desirable. Teaching duties include two lecture courses to be taught in the fall quarter and winter quarter, respectively, and a laboratory course to be taught in the winter quarter and repeated in the spring quarter. Applicants should send curriculum vitae and the names and addresses of five references. Send applications by 30 January 1983 to: **Dr. Jack Bradbury, Search Committee, Department of Biology C-016, University of California, San Diego, La Jolla, Calif. 92093.**

The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION

The Department of Biology, University of California, San Diego, invites applications for a tenure-track faculty position in the general area of molecular biology/molecular genetics. Salary and rank will be commensurate with qualifications and experience. Ph.D. required. The nontenured appointee must have had postdoctoral training and is expected to conduct a vigorous research program. The tenured appointee must already have made significant contributions to the field and is expected to continue a vigorous research program. Applicants should send curriculum vitae and a list of publications. The position will be available beginning September 1983. Send applications by 10 January 1983 to: **Carrie Garnett, Molecular Geneticist Search Committee, University of California, San Diego, Department of Biology B-022, La Jolla, Calif. 92093.**

The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.

University of Alaska, Juneau (UAJ): **FACULTY POSITION IN FISHERIES RESOURCE MANAGEMENT**, responsible to Dean of Fisheries with joint appointment in School of Business. Primary teaching responsibility at master's level. UAJ is committed to develop programs which contribute to effective management of marine resources. Required: Doctorate in appropriate field, experience/advanced education in economics, law, public policy related to fisheries/marine resources, and basic understanding of biological management of fisheries. Salary competitive and commensurate with rank and experience. This is a 9-month, tenure-track position. Closing date: 1 February 1983, may be extended. Starting date as soon as possible thereafter. Letter of application, curriculum vitae, names of three references (include addresses and telephone numbers), and statement explaining interest in position sent to:

**Dr. Leonard Mendelbaum, Associate Dean
School of Business
University of Alaska, Juneau
1108 F Street
Juneau, Alaska 99801
Telephone: 907-789-4402**

The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution.

FACULTY POSITION: Applications are invited for a position as **assistant professor of oncology** at the McArdle Laboratory of the University of Wisconsin. Applicants should have a firm intellectual commitment to cancer research. They should be prepared to develop a strong independent research program complementary to the research of other investigators at the McArdle Laboratory (that is, in one of the three general areas of chemical, carcinogenesis, and tumor virology, or tumor biology) and to contribute to the interactive research environment of the laboratory.

Each applicant should submit curriculum vitae, list of publications, and a two- to three-page statement of research accomplishments and future objectives. Each applicant should also ask at least three persons qualified to evaluate the candidate's research to send letters of recommendation.

Applicants for the position will be considered through February 1983 after which the position will be filled as promptly as possible. *We are supportive of and committed to a program of Affirmative Action at both the Department and University levels.*

Send applications and letters of recommendation to: **Dr. Henry C. Pitot, Department of Oncology, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin 53706.**

MICROBIAL GENETICIST TEXAS TECH UNIVERSITY

Search reopened for a tenure-track faculty position. Applicants should be capable of establishing a strong research program utilizing recent molecular biology-recombinant DNA technologies. Teaching duties are in introductory microbiology and microbial genetics with graduate teaching in field of expertise. Ability to direct master's and doctoral level research is required. Curriculum vitae, recent reprints, statement of research goals, and the names of three references should be sent to: **Dr. Caryl E. Heintz, Chairman, Search Committee, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409.** *Texas Tech, An Affirmative Action/Equal Opportunity Employer*, is one of four major comprehensive state universities in Texas and has an enrollment of approximately 23,000 students. Lubbock, a city of about 200,000, is known for its pleasant climate.

POSITIONS OPEN

FOREST ECOLOGY HARVARD UNIVERSITY

The Department of Organismic and Evolutionary Biology and the Harvard Forest invite applications for an **assistant professorship** in the area of forest ecology. Responsibilities would include teaching in the Department of Organismic and Evolutionary Biology and research at the Harvard Forest. Applications are encouraged from candidates in all areas of forest ecology, including, but not limited to physiological ecology, population dynamics, and silviculture.

The Harvard Forest is located approximately 70 miles west of Cambridge. It has excellent laboratory facilities and includes about 3000 acres of forest. Detailed records of stand compositions and silviculture treatment are available, going back to about 1907.

Letters of application and curriculum vitae should be sent to: **Forest Ecology Search Committee, Department of Organismic and Evolutionary Biology, 145 Biological Laboratories, 16 Divinity Avenue, Cambridge, Mass. 02138,** by 15 January 1983.

Harvard is an Affirmative Action/Equal Opportunity Employer.

IMMUNOCHEMIST OR ANALYTICAL BIOCHEMIST. M.S. or equivalent, familiar with HPLC, GLC, and/or AAA. Experience in (glyco-) protein or lipid preparation and identification. Working on antigen isolation from animal infectious microbes (*Brucella*). Please send references and résumés to: **Dr. Albert M. Wu, Department of Veterinary Pathology, College of Veterinary Medicine, Texas A&M University, College Station, Texas 77843.**

An Equal Opportunity/Affirmative Action Employer

IMMUNOLOGIST

The Department of Biology, University of California, Riverside, seeks an immunologist for a tenure-track position starting 1 July 1983. The appointment will be at the assistant professor level. We seek an individual with strong research potential to interact with an active group in cell biology focused on cell surface phenomena. Preference will be given to persons doing research in reproductive immunology and/or cell surface immunology. A productive research program and willingness to develop courses at the graduate and undergraduate level are essential. Postdoctoral experience is highly desirable. Applicants should send up-to-date curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and request at least three letters of reference be sent to:

**Professor Vaughan Shoemaker, Chairman
Department of Biology
University of California
Riverside, California 92521**

The University of California is an Equal Opportunity/Affirmative Action Employer. Applications are invited from all qualified individuals.

MAMMARY GLAND BIOLOGY. postdoctoral position available to study the role of cellular endomembranes in synthesis, modification, and secretion of the constituents of milk. Applicants with experience in nucleic acid isolation and in vitro translation are welcomed. Submit curriculum vitae to: **T. W. Keenan, Head, Department of Biochemistry, Virginia Polytechnic Institute, Blacksburg, Va. 24061.** *Virginia Tech is an Equal Opportunity/Affirmative Action Employer.*

MECHANICS OF ADHESION. A funded postdoctoral position is open immediately for a recent Ph.D. with potential interests in the physics and/or chemistry of adhesion in marine environments. The candidate should have experience in one or more of the following (or allied) fields: surface chemistry, cellular adhesion, microbial attachment, biophysics, or chemical engineering. The research program, under the direction of Drs. P. A. Jumars and A. R. M. Nowell, emphasizes experimental analysis of the effects of organisms on marine sediment transport, but it is anticipated that the successful candidate would devote most of her or his time to more basic questions of adhesion in an ionic medium. Appointment will be in the School of Oceanography as a research associate (postdoctoral) for a period of 1 year, with the possibility of extension through a second and final year. Applicants are requested to submit a résumé and names of four references to: **Chairman, Recruitment Committee, School of Oceanography, University of Washington, Seattle, Wash. 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

Staff Biophysicist

Brookhaven National Laboratory

An opportunity exists for a Ph.D. Biophysicist with interest in biopolymers to develop use of small angle neutron scattering for the analysis of polymers, proteins, lipids, and nucleic acid complexes. Candidates should have experience in instrumentation design and construction, and be prepared to interact with outside users of the station at Brookhaven's High Flux Beam Reactor.

Apply promptly, with curriculum vitae that includes list of publications and names of three references, to: Benno P. Schoenborn, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., New York 11973

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Brookhaven National Laboratory
Associated Universities Inc.

UNIVERSITY OF MISSOURI— ST. LOUIS SCHOOL OF OPTOMETRY FACULTY POSITIONS



The School is seeking full-time faculty members. Individuals with expertise in the following areas will be considered:

Binocular Vision/Ocular Motility. Specific responsibilities will include teaching courses in visual science to optometry students and conducting research. Evidence of scholarly research activities, in the form of published articles in refereed journals and papers presented at professional meetings will be heavily weighted, as will evidence of teaching ability. The person selected will be expected to develop new research proposals and to obtain support for new or continuing research activities. Ph.D. or O.D./Ph.D. required. Post-doctoral research experience is desirable.

Public Health/Epidemiologist. Specific responsibilities will include teaching courses in the optometry curriculum, possibly supervising students in clinical work, as well as establishing courses in specialty area. Candidates should provide evidence of teaching ability and scholarly activities. The individual selected will be expected to interact with the faculty in the development of new (or the continuation of on-going) research programs. The O.D. or Ph.D. is an essential requirement; however, a M.P.H. degree, residency completion or additional clinical experience is desirable.

Rank and salary will be commensurate with experience. The date of appointment is negotiable. Letters of application with current resumes, including the names of three references, should be submitted no later than February 15, 1983 to:

DR. JERRY L. CHRISTENSEN
DEAN, SCHOOL OF OPTOMETRY
UNIVERSITY OF MISSOURI-ST. LOUIS
8001 NATURAL BRIDGE ROAD
ST. LOUIS, MISSOURI 63121

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POSTDOCTORAL RESEARCH AWARDS

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THE NATIONAL RESEARCH COUNCIL

The National Research Council will make awards in 1983 under the Resident Associateship Program, which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in the fields of:

Applied Computer Sciences
Applied Mathematics
Probability Theory and Stochastic Processes
Combustion Research
Fluid Mechanics
Continuum Mechanics
Materials Sciences
Nuclear and Radiation Physics
Physical Chemistry
Quantum Chemistry

in the Ballistic Research Laboratory complex located in the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Baltimore, Philadelphia, and Washington, D.C.

Some programs are open to senior investigators as well as recent doctorates.

Further details on research programs may be obtained from: **Dr. L. J. Puckett, telephone: 301-278-6246, at the Ballistic Research Laboratory, Aberdeen Proving Ground, Md. 21005.**

For application materials and details on specific research opportunities, write promptly, giving areas of interest, to:

Associateship Office (JH-610-P)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, D.C. 20418

Postmark deadline for application is 15 January.

RESEARCH ASSISTANTS and RESEARCH ASSOCIATES

GENETICS INSTITUTE is a well-funded company actively engaged in the development and application of recombinant DNA technology to human health care, agriculture, and chemicals. During the first eighteen months of our operation,

we have grown to nearly 70 employees and have initiated research projects in collaboration with a number of prominent commercial partners. We currently have vacancies for talented research technicians skilled in the following areas:

- DNA Sequencing
- Fermentation Technology
- Gene Expression
- Mammalian, Insect & Plant Tissue Culture
- Organic Chemistry
- Enzymology
- Gene Cloning
- Immunology
- Microbial Physiology
- Nucleic Acid Chemistry
- Protein Chemistry

We offer to highly motivated individuals career advancement potential in a stimulating scientific environment, competitive salaries, and complete benefits packages.

Qualified candidates should forward their resumes, including references, in confidence to: Robert Kamen, Director of Research; Genetics Institute; 225 Longwood Avenue; Boston, MA 02115.

GENETICS
INSTITUTE

SCIENTIST Process Development

Genentech, Inc., a recognized leader in the field of recombinant DNA research and development, has a position for a Scientist in the area of procaryotic molecular microbiology. This position will involve developing new microbiologically-based biotechnology processes in a team environment.

Qualified applicants will have a PhD and postdoctoral experience in microbiology, molecular biology or biochemistry. Expertise in a combination of the following areas is required: microbial physiology, microbial genetics, gene regulation of protein secretion. Must be accompanied by a strong record of scientific accomplishment.

The successful candidate will be a self-motivated individual who is interested in fundamental areas of microbiology as they apply to biotechnology processes.

We offer excellent salaries and benefits, as well as a stimulating and challenging work environment. For immediate consideration please send curriculum vitae and names of three references to **HUMAN RESOURCES**, referring to **Position #SCI-1000**

Genentech, Inc.
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Genentech, Inc.

460 Point San Bruno Blvd.,
South San Francisco,
CA 94080.

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POSITIONS OPEN

MICROBIAL PHYSIOLOGY AND INDUSTRIAL MICROBIOLOGY. Native Plants, Inc., a biotechnology firm based in Salt Lake City, Utah, invites applications for two Ph.D.-level positions in microbiology. Background in bacterial physiology, fungal physiology, plant-pathogen interactions, nitrogen fixation, and/or industrial microbiology are desired. Our current work in microbiology focuses on beneficial plant-microbe symbioses, and candidates should have interests in this area. Opportunities also exist for interactions with our research groups in plant tissue culture, molecular biology, and phytochemistry. Applicants should send curriculum vitae, names of three references, and a statement of interests to: **Dr. Tim Wood, Native Plants, Inc., 360 Wakara Way, Salt Lake City, Utah 84108.**

DEPARTMENT OF BIOLOGY Swarthmore College

A tenure-track position beginning September 1983 for a **MICROBIOLOGIST**, Ph.D., preferably with postdoctoral experience. We seek a candidate with broad experience in microbiology to teach general microbiology, virology, an advanced offering, and to participate in introductory biology. We prefer making the appointment at the assistant professor level. Interested persons should submit curriculum vitae, statement of research interests, three letters of recommendation, and transcripts by 1 February 1983 to:

**Dr. John B. Jenkins, Chairman
Department of Biology
Swarthmore College
Swarthmore, Pa. 19081**

Swarthmore College is an Equal Opportunity Employer.

MOLECULAR CELL PHYSIOLOGIST

A tenured or tenure-track teaching and research position is available fall 1983 in eukaryotic cell/organelle physiology. The appointment can be made at the rank of **FULL, ASSOCIATE OR ASSISTANT PROFESSOR**, depending on experience. We are seeking an established biologist with a record of independent research, using molecular techniques such as recombinant DNA, to study eukaryotic systems. A vigorous research program with external funding from government or industry is expected. A commitment to teaching at the undergraduate and graduate level is important. Please send a résumé, names and addresses of three references, two or three selected reprints, and a brief discussion of present and prospective research and teaching interests by 31 January 1983 to: **Search Committee, Department of Biology, Portland State University, P.O. Box 751, Portland, Oregon 97207. An Equal Opportunity/Affirmative Action Employer.**

MOLECULAR GENETICIST with an interest in exploiting restriction fragment length polymorphisms in biomedical research, to establish a new laboratory in our Genetics Department. We maintain over 2500 baboons and 500 marsupials in addition to standard laboratory animals. Major collaborative projects among our Biochemical Genetics, Population Genetics, and Immunogenetics Laboratories involve genetic influence on predisposition to atherosclerosis in baboons; regulation of immune functions and of X-chromosome inactivation in marsupials, and regulation and organization of genes in and near the major histocompatibility complexes of mice, rats, baboons, and marsupials. The successful applicant will be expected to develop a strong independent research program and will have the opportunity to collaborate in any of the above projects. Academic affiliation may also be possible. This is an excellent opportunity for a creative scientist in a young and expanding genetics department under the direction of Dr. John L. VandeBerg. Send résumé, statement of research interests, and names and addresses of three references to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Texas 78284. We are an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION for structural studies on the NaK/ATPase and other membrane proteins using electron microscopy, x-ray diffraction, and circular dichroism spectroscopy. Background in EM (image reconstruction), x-ray or neutron diffraction or crystallographic computing required. Available immediately. Send curriculum vitae and two letters of reference to: **Dr. B. A. Wallace, Department of Biochemistry, Columbia University, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

PATHOGENIC MICROBIOLOGIST or TUMOR VIROLOGIST to teach general microbiology, supervise graduate students (master's and Ph.D.), and maintain an active research program in area of specialty. Candidate must have demonstrated research ability in either of the above areas. Position will be at the level of assistant professor and salary will be competitive and commensurate with qualifications. Submit curriculum vitae, transcript of graduate work, three letters of recommendation, and statement of research interest to: **Chairperson, Search Committee, Department of Life Sciences, Indiana State University, Terre Haute, Ind. 47809, no later than 7 February 1983. Position is to be filled no later than 1 September 1983. Indiana State is an Equal Opportunity/Affirmative Action Employer.**

POPULATION ECOLOGIST TEXAS TECH UNIVERSITY

Applications are invited for a position in **POPULATION ECOLOGY** at the rank of assistant professor. Texas Tech is one of the four major comprehensive universities in Texas and has an enrollment of approximately 23,000 students. The university is located in Lubbock, a city of about 200,000 that is known for its pleasant climate. Candidates for this position must have a strong background in **BIOSTATISTICS** and be able to teach biometry and population ecology for upperclassmen and graduate students. Maintaining an active research program and training of graduate students is expected. Preference will be given to candidates whose interests are in field-related research programs. Starting date is 1 September 1983. Apply with complete curriculum vitae and a list of references by 15 February 1983 to: **Dr. Robert J. Baker, Chairman, Search Committee, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409.**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE. Ph.D. in biochemistry, physiology, cell biology, and so forth. To study phospholipid metabolism, calcium fluxes, receptor binding during pancreas stimulus-secretion coupling. Laboratory in major Harvard teaching hospital. Send résumé and names of three references to: **Dr. Michael Steer, Department of Surgery, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.**

POSTDOCTORAL POSITION available January 1983 for studies of symbiotic compatibility in the nitrogen-fixing *Frankia-actinorhizal* plant symbioses. A background in some aspect of symbiology, research required with experience in ultrastructural, serological, or physiological techniques preferred. Send curriculum vitae and names of three references to: **Dr. Dwight Baker, Charles F. Kettering Research Laboratory, 150 East South College Street, Yellow Springs, Ohio 45387. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to work on physical and chemical properties of the iron-molybdenum cofactor of nitrogenase. Send curriculum vitae to: **Dr. William E. Newton, Charles F. Kettering Research Laboratory, 150 East South College Street, Yellow Springs, Ohio 45387. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

The Savannah River Ecology Laboratory announces an opening for a **radioecologist/radiochemist** to work in an ongoing program investigating the biogeochemistry of transuranium elements in aquatic systems. The successful candidate should have experience in aquatic research and a working knowledge of radioisotope counting procedures. The duration of the appointment is 1 year with a possible 1 year extension. U.S. citizenship is required. Send applications, curriculum vitae, and names of three references to:

**Dr. James Alberts
Savannah River Ecology Laboratory
Drawer E
Aiken, S.C. 29801**

University of Georgia is an Equal Opportunity/Affirmative Action Institution.

POSTDOCTORAL POSITION to participate in ongoing studies on mechanisms of glycosylation of proteins [see *J. Biol. Chem.* 257, 10811 (1982); 256, 989 (1981); and 255, 9225 (1980)]. Experience in purification of proteins highly desirable. Send résumé and names of three references to: **Dr. C. B. Hirschberg, E. A. Doisy Department of Biochemistry, Saint Louis University School of Medicine, Saint Louis, Mo. 63104. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSITIONS OPEN

Post Doctoral Positions

- Design, synthesis, characterization, and application of new fluorescent probes
- Flow cytometry and multiparameter cell analysis
- Quantitative fluorescence microscopy and image analysis



Post Doctoral Candidates apply directly to the Center for Fluorescence Research in Biomedical Sciences, Carnegie-Mellon University, 4400 Fifth Ave., Pittsburgh, PA 15213

D. Lansing Taylor
Alan Waggoner
Robert F. Murphy
Fred Lanni

Graduate Students apply through Biological Sciences.

POSTDOCTORAL POSITIONS UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

Two postdoctoral positions will be available July 1983, each initially for 2 years with a flexible starting date and negotiable for a longer period. Areas of research include: structural and functional studies of vertebrate and invertebrate rhodopsins using protein chemical, NMR, EPR, electron microscopy, and diffraction methods; investigation of transmembrane ion movements using spectroscopic approaches; development of new spectroscopic methods for investigating electrical aspects of structure and function in biological membranes; studies of molecular mechanisms of biological switching ("gating") in excitable membranes. Background in biophysics, chemistry, biochemistry, or physiology with a specific interest in membrane systems would be most appropriate. Research facilities are located in the Jules Stein Eye Institute, the Department of Chemistry, and the Molecular Biology Institute, all on the UCLA campus. Send curriculum vitae and references to:

Professor Wayne L. Hubbell, Jules Stein Eye Institute, University of California, Los Angeles, Calif. 90024.

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

POSTDOCTORAL POSITION available after 1 January 1983 at the California Institute of Technology for research in the application of Extended X-Ray Absorption Fine Structure (EXAFS) spectroscopy to problems in chemical catalysis. Graduate training in physical chemistry, spectroscopy, or related areas is recommended. Fellowship which provides a stipend of \$22,000 per year is restricted to U.S. or Israeli citizens. Applicants should send their résumé and three letters of reference to:

**Dr. John D. Baldeschwieler
Division of Chemistry and Chemical Engineering
California Institute of Technology
Pasadena, Calif. 91125**

Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION. Candidate sought with foundation in biochemistry or cell biology and interest in joining project focused on molecular biology of cellular homologs of retroviral oncogenes. Will work primarily with nucleic acids. Salary range: \$13,000 to \$15,000. Send curriculum vitae and names of three references to: **Dr. Diana Sheiness, Department of Biochemistry, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, La. 70112. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION to study the equilibria and kinetics of protein-DNA complexes involved in replication. Some of the following techniques will be used: Protein and DNA purification, stopped-flow kinetics, fluorescence spectroscopy, sedimentation, gel electrophoresis, EM, and recombinant DNA techniques. Send curriculum vitae and the names of three references to: **Dr. T. M. Lohman, Department of Biochemistry and Biophysics, Texas A & M University, College Station, Texas 77843.**



Department of Physics LECTURERS

Applications are invited from suitably qualified persons, regardless of sex, race, colour or national origin, for appointment to the above posts.

The successful applicants will be expected to participate in the teaching activities of the department and in research. Duties are to be assumed on 1 January 1983 or as soon thereafter as possible.

The successful overseas applicants may be offered a three year contract, if preferred. The University will pay the return airfare of these applicants.

Salary will be in the range **R12 657 – R22 173 p.a.** In addition an annual bonus is payable. Benefits include pension and medical aid funds membership, a housing subsidy (if eligible) and generous leave privileges.

The main research activities in the department are in the areas of solid state physics and nuclear physics. Departmental facilities are described in the information sheet relating to these posts and may be obtained from the Registrar (Planning & Staffing), University of the Witwatersrand, 1 Jan Smuts Avenue, Johannesburg 2001, South Africa, with whom applications should be lodged by 31 December 1982.

**UNIVERSITY OF THE WITWATERSRAND,
JOHANNESBURG**

Grey Recruitment 10062

DEAN College of Engineering University of California, Santa Barbara

Nominations and applications are invited for the position of dean of the College of Engineering at the University of California, Santa Barbara (UCSB). The dean reports directly to the vice chancellor and serves as chief administrative officer for a college consisting of the departments of Chemical and Nuclear Engineering, Computer Science, Electrical and Computer Engineering, and Mechanical and Environmental Engineering, with a combined faculty of approximately 55. Established in 1962, the College of Engineering offers professional training with both undergraduate and graduate degrees in each of the disciplines listed above. Its growing enrollment is currently about 1700 undergraduate and 325 graduate students.

UCSB has emerged as a national center for research in the basic and applied sciences; many distinguished appointments have been made, both within the College of Engineering and in the basic sciences. Because of its increasing number of students, presently unfilled faculty positions, and planned new building, the College of Engineering has exceptional potential for future development. In the next few years, the College will round out its curriculum, increase its involvement in the national community of engineers and applied scientists, and further expand its research and extramural funding.

The new dean of engineering will be the key person in determining how much of this potential is realized. The position demands someone with great initiative, outstanding accomplishments in engineering, and wide connections in academia and in industry. The candidate must be qualified for appointment as a tenured professor in the University of California and must combine the administrative and research skills needed to develop the potential of the College.

Applications and nominations, including a current résumé, should be sent to:

Office of the Chancellor
Cheadle Hall
University of California
Santa Barbara, Calif. 93106
Attention: James L. Merz, Chairman
Engineering Dean Search Committee
Telephone: 805-961-3821

Nominations and applications are desired by 28 February 1983. The University of California is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR

Combined Ground-Based Astronomy Observatories

Applications and/or nominations are invited for the position of director of the combined ground-based national observatories managed by the Association of Universities for Research in Astronomy, Inc. (AURA). The combined observatories, which will be headquartered in Tucson, Arizona, will be comprised of the three AURA-managed national optical ground-based astronomical centers, each to be headed by an associate director: Kitt Peak National Observatory, Tucson, Arizona; Cerro Tololo Inter-American Observatory, La Serena, Chile; and the National Solar Observatories, Tucson and Sunspot, New Mexico.

The director will have responsibility for assuring accomplishment of the mission of these observatories, and deciding on priorities and allocating resources among the observatories within the constraints of an approved Program Plan and associated budget. The director will formulate long-range objectives for the combined observatories in consultation with the three associate directors and with input from the astronomical community. The director will report through the AURA president to the AURA Board of Directors, and will maintain close communications with the funding agency and the university community.

The director must have an earned doctorate in astronomy or a closely related physical science and a thorough understanding of the nature and purpose of major user-oriented world centers of astronomy. The successful candidate will be a recognized scientist as demonstrated by a record of significant publications and will have been effective in liaison with the national and international scientific communities. Experience in the management and supervision of major scientific research programs is required. Familiarity with development of state-of-the-art experimental techniques is highly desirable.

Applications, each accompanied by a résumé and names and addresses of at least three professional referees, or nominations with supporting statements, should be submitted no later than 15 February 1983 to:

Dr. George Clark, Chairman
Director of Search Committee
AURA, Inc., Corporate Office
1002 North Warren
Tucson, Arizona 85719

AURA, Inc. is an Equal Opportunity/Affirmative Action Employer.

Mobil

BIOCHEMICAL PHARMACOLOGIST

Mobil Oil Corporation has an immediate opening for a Biochemical Pharmacologist at its toxicology laboratory near Princeton, New Jersey.

In addition to a Ph.D. in Biochemistry or closely related discipline, a minimum of 1-2 years experience in the isolation and assay of biochemical markers as indicators of toxicological or pharmacological action is required. The candidate should have a background in analytical biochemistry, control of intermediary metabolism, enzymology and pharmacology.

Salary commensurate with qualifications and experience. If interested, please send resume to: R.H. Daniels, Mobil Oil Corporation, P.O. Box 1025, Princeton, New Jersey 08540.

Mobil Oil Corporation

an equal opportunity employer

POSITIONS OPEN

POSTDOCTORAL FELLOW. Postdoctoral position available immediately in the Biology Department, University of California, San Diego (UCSD). Individuals with experience in molecular biology, genetics, or immunology who are interested in the nervous system, are encouraged to apply. Send curriculum vitae, references, and summary of research interests to: **Neurobiology Group, B-022, UCSD, La Jolla, Calif. 92093.**

POSTDOCTORAL POSITION available immediately for a recent Ph.D. in biochemistry or molecular biology. Experience in enzymology, protein chemistry, nucleic acid chemistry, or molecular genetics desirable. Laboratory studying the genetics, regulation, and enzymology of deoxyribonucleotide and DNA synthesis in phage T4 infection. Includes membrane and recombinant DNA studies. Send curriculum vitae, including three references and personal letter, to: **Dr. G. Robert Greenberg, Department of Biological Chemistry, Box 034, University of Michigan, Ann Arbor, Mich. 48109. A nondiscriminatory, Affirmative Action Employer.**

POSTDOCTORAL POSITION

Research associate (postdoctoral) position in physical oceanography is available in the School of Oceanography and the Joint Institute for the Study of the Atmosphere and Ocean (JISAO). The successful applicant is expected to cooperate with scientists in the Coastal Physics Group at the Pacific Marine Environmental Laboratory (NOAA) and in the School of Oceanography who are studying estuarine circulation and the role of particulates in pollutant transport primarily in the Puget Sound estuarine system. Candidates with numerical modeling experience interested in working with the existing data base are invited to apply. Term of appointment is 1 year with the option of renewal for a second year. The position is available starting April 1983. Closing date for applications is 15 February 1983. Send curriculum vitae and a list of four references to: **Director, JISAO, c/o Department of Atmospheric Sciences, AK-40, University of Washington, Seattle, Wash. 98195.**

An Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION IN BIOSPHERIC RESOURCE ANALYSIS DIVISION

A position is available for a research associate in the Biospheric Resource Analysis Division of the Holcomb Research Institute, Butler University, Indianapolis, Indiana. The successful applicant should have a recent Ph.D. in a natural resource-related science, and be skilled in the application of quantitative regional or a large-scale spatial analysis in ecological problems.

The research associate will be expected to participate in current research projects on present and future trends in biospheric carbon utilization and forest lands dynamics. The person will also be expected to develop a research program that is complementary to those being undertaken by current institute staff. A background in computer modeling and simulation studies would be advantageous in relation to one or more of the following: soil and agriculture studies, forest science and/or land use. A demonstrated ability to prepare fundable research proposals and to publish research results is expected.

Persons interested in applying for the position should, before 31 January 1983, send curriculum vitae and names of three professional references to:

**Darrell R. Fishel
Business Manager
Holcomb Research Institute
Butler University
Indianapolis, Indiana 46208**

Butler University is an Equal Opportunity Employer.

The **PFEIFFER PHARMACEUTICAL SCIENCES LABORATORIES** at the **MASSACHUSETTS COLLEGE OF PHARMACY AND ALLIED HEALTH SCIENCES** solicits applications for a **RESEARCH ASSOCIATE OR POSTDOCTORAL** position in **ANALYTICAL CHEMISTRY**. Multidisciplinary work to develop analytical methods for drugs in biological fluids, participation in biopharmaceutical/pharmacokinetic studies, and interfacing with graduate student research with publication encouraged. Applicants should send a résumé and names of two references to: **Robert W. Mendes, Director, Pfeiffer Pharmaceutical Sciences Laboratories, 179 Longwood Avenue, Boston, Mass. 02115. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE—Core electron microscopy laboratory requires a Ph.D. with training and experience in TEM/SEM and a wide variety of associated methods. Will interact with many research groups in the areas of cell biology and immunology and will be involved in the core laboratory's own research, related to the use of immune probes of ultra structure. Salary commensurate with experience. Send curriculum vitae, statement of research interests, and names and telephone numbers of three references to: **Employment Manager, SIDNEY FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available to study DNA replication and expression of genes coding for immunoglobulins and histocompatibility antigens. Project also includes identification and isolation of origins of replication in mammalian DNA. Challenging research project offers opportunity for training in molecular biology and recombinant DNA techniques. Salary: \$15,000 to \$19,000, commensurate with experience. Send curriculum vitae and have two letters of recommendation sent to: **Dr. Carl Schildkraut, Department of Cell Biology, Albert Einstein College of Medicine, Bronx, N.Y. 10461.**

POSTDOCTORAL RESEARCH ASSOCIATE. Seek protein crystallographer with recent Ph.D. degree to join the neutron program at Brookhaven National Laboratory, to develop advanced techniques for hydrogen exchange studies and solvent structure. Appointee will have the opportunity to work with novel neutron data collection systems using high-resolution position-sensitive detectors. Apply promptly, with curriculum vitae that includes list of publications and names of three references, to: **Benno P. Schoenborn, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

The Department of Psychiatry of the University of Vermont College of Medicine invites applications from Board-certified **PSYCHIATRISTS** with special expertise in **CLINICAL PSYCHOPHARMACOLOGICAL RESEARCH**. Preference will be given to psychiatrists whose clinical interests are in the areas of consultation-liaison psychiatry or behavioral medicine. The appointment is a full-time tenure-track position, with rank and salary commensurate with background and experience. The individual chosen for this position will be a member of the department's highly active Neuroscience Research Unit and have major responsibility for coordinating psychopharmacological investigations in both ambulatory and inpatient clinical settings. Applicants should forward curriculum vitae, a summary of research interests, and references by 15 February 1983 to: **Robert H. Lenox, M.D., Director, Neuroscience Research Unit, University of Vermont College of Medicine, Burlington, Vt. 05405. The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Minority and female candidates are encouraged to apply.**

RESEARCH ASSOCIATE (postdoctoral). Position available immediately for cell culture studies of factors affecting ovarian cellular differentiation. Expertise in cell culture, membrane receptor methodology, and/or biochemical endocrinology desirable but not necessary. Please send curriculum vitae and references to: **Dr. David W. Schomberg, Box 3323, Departments of Obstetrics and Gynecology and Physiology, Duke University Medical Center, Durham, N.C. 27710. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE OR ASSISTANT MEMBER. Molecular biology of the Factor VIII protein. Position available in the Program in Blood and Vascular Disease and the Department of Immunology of the Research Institute of Scripps Clinic. Applicant to address the molecular basis of protein:protein and protein:lipid interactions involved in the function of the Factor VIII protein as a cofactor for the Factor IXa cleavage of Factor X. Studies include fragmentation to isolate functional domains, amino acid sequencing of functional domain structures, and integration of the molecular genetics with the protein molecular biology. Background in protein molecular biology essential; and experience with the coagulation proteases is preferred. Submit curriculum vitae, bibliography, and at least three references to: **T. S. Edgington, M.D., Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, Calif. 92037. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

The **DEPARTMENT OF PSYCHOLOGY** of the University of Minnesota contemplates a faculty position opening in the broad area of **experimental cognitive science** for appointment in September 1983, and invites applications. The appointment will be with tenure at either the associate professor or professor rank, depending upon the candidate's level of career accomplishment. Candidates should have primary interests in one or more of the following areas: (i) psychology of language; (ii) artificial intelligence and/or quantitative modelling approaches to human cognition; (iii) problem solving, decision making, choice behavior, and human reasoning; (iv) structure of human memory; (v) action systems/perceptual-motor behavior; and (vi) biochemical/neurological studies of human cognition. Candidates are expected to have an active research program in their area of specialization and contribute to the research training of graduate students. Teaching responsibilities will involve courses at the undergraduate level, the undergraduate/graduate level, and the graduate level, with these courses compatible with the individual's interests and expertise. Salary level is competitive and will depend on qualifications and experience. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

Candidates should submit curriculum vitae, three letters of reference, three representative publications, and a statement of long-term research interests to: **Search Committee in Cognitive Science, Department of Psychology, n218 Elliott Hall, 75 East River Road, University of Minnesota, Minneapolis, Minnesota 55455.** Applications must be received by 29 January 1983.

RESEARCH ASSISTANT PROFESSOR, nontenure-track, Ph.D. or M.D., with pertinent postdoctoral experience. Candidates will be expected to have theoretical knowledge and practical proficiency in biochemical and biophysical analytical approaches to studying the role of ion channels and pumps in stimulus secretion coupling in endocrine cells. Please send résumé, including list of publications and summary of research, and three letters of reference to:

**Dr. Franz Matschinsky
Director, Diabetes Center
414 Anatomy-Chemistry Building/G3
University of Pennsylvania
School of Medicine
Philadelphia, Pa. 19104**

The deadline for applications is 15 January 1983. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

One or two **RESEARCH ASSISTANT PROFESSORS**, nontenure-track, Ph.D. or M.D., and at least 3 years of postdoctoral experience. Candidates will be expected to do full-time research in *Drosophila* development using recombinant DNA, monoclonal antibodies, and microsurgical techniques. Please send résumé, including list of publications and summary of research, and three letters of reference to:

**Dr. David R. Trentham, Chairman
Department of Biochemistry and Biophysics
302 Anatomy-Chemistry Building/G3
University of Pennsylvania
School of Medicine
Philadelphia, Pa. 19104**

Deadline for applications is 15 January 1983. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

HARVARD UNIVERSITY VERTEBRATE BEHAVIORIST

The Department of Organismic and Evolutionary Biology invites applications for a position as an assistant or associate professor in the area of vertebrate ethology, with emphasis on experimental behavioral ecology and/or behavioral physiology. The candidate should be able and willing to supervise training in both field research and laboratory experimentation dealing with analysis of whole patterns of vertebrate behavior. Teaching duties will be at the undergraduate and graduate levels.

Applicants should send curriculum vitae and statement of research interests and have three letters of recommendation sent to: **Professor Bert Holldobler, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138, by 15 January 1983.**

Harvard is an Affirmative Action/Equal Opportunity Employer.

SECTION HEAD, CNS RESEARCH

As a member of the Johnson & Johnson family of companies we're one of the nation's leading researchers and manufacturers of ethical drug products. With a solid reputation built on years of service to consumers and the medical profession we are dedicated to brand name integrity and quality products.

A research opportunity exists for Section Head, CNS Research, to lead a group of established scientists in a drug discovery program. The successful candidate will have demonstrated the ability to conduct multidisciplinary research requiring the coordination of biochemistry, behavior and electrophysiology.

Qualifications include a PhD in Pharmacology, Biochemistry or related neuroscience discipline and at least 8 years of broad experience in neuropharmacology.

In addition to a very pleasant environment at our ultra modern headquarters conveniently located in a beautiful country setting in suburban Philadelphia, we offer a competitive starting salary and a comprehensive benefits package. For immediate consideration forward your resume with salary requirements to J. E. Foley, Manager, Employment.

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Spring House, PA 19477

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NMR Spectroscopy

Smith Kline & French Laboratories, a leader in pharmaceutical research and technology, is seeking several scientists to join a new research program in biological NMR spectroscopy in an environment designed to foster creative, innovative research and to promote personal and professional growth.

The areas of interest include high resolution spectroscopy of biomolecules and **in vivo** imaging and spectroscopy.

Permanent positions are available for Scientists with a substantial background in experimental NMR spectroscopy. Post doctoral positions are also available. We encourage publication of findings in leading journals and a full interaction with the scientific community.

We offer an excellent salary and benefits including liberal relocation policy. Please send your c.v. to: C.J. Elder, SMITH KLINE & FRENCH LABORATORIES, a division of, SMITHKLINE BECKMAN CORPORATION, 1576 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

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BIOTECHNOLOGY RESEARCH

In response to the enthusiastic support advanced by members of the health care industry, Unigene Laboratories is expanding its research staff. We are inviting applications from highly qualified, Ph.D.-level candidates, with strong backgrounds in either of the following disciplines:

MOLECULAR BIOLOGY

Extensive experience in recombinant DNA technology required. Training in bacterial and yeast genetics, construction of prokaryotic/eukaryotic expression vectors, or animal virology desirable.

PROTEIN CHEMISTRY

Minimum 2 years post-doctoral experience with strong publication record in protein purification (classical and HPLC), modification and sequence analysis. Familiarity with peptide synthesis, enzyme characterization or protein immobilization techniques desirable.

The Company

Unigene Laboratories is a financially independent, academically-committed corporation directed by scientists. Our new facility is located in rural Fairfield, N.J. We have established a creative, interactive environment in an institution which is exclusively devoted to the performance of in-house and contract-supported research. In addition to an excellent benefit and compensation program, qualified scientists will receive equity positions. For a unique opportunity to grow with a young, yet established company, please send C.V. to Dr. Levy, Unigene Laboratories, Inc., 110 Little Falls Road, Fairfield, NJ 07006.

All applications will be handled in strictest confidence.

unigene

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POSITIONS OPEN

POST-DOCTORAL POSITIONS

Medicinal/Organic Chemistry or Inorganic Complex Chemistry

The Department of Radiology has positions available in its Contrast Agent Development Laboratory for medicinal or organic chemists with practical synthetic experience. Additionally, an inorganic synthetic chemist is required (Ph.D. or M.Sc.). Appointments are for one year starting January 1, 1983, with extensions dependent on funding.

Please send CV and references to Dr. R.D. Neirinsky, Director, Contrast Agent Development Laboratory, Department of Radiology, Harvard Medical School/Brigham and Women's Hospital, 25 Shattuck Street, Boston, Massachusetts 02115.

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A WORLD OF DIFFERENCE



Brigham and Women's Hospital
A Teaching Affiliate of Harvard Medical School
10 Vining Street, Boston, Massachusetts 02115

RESEARCH ASSOCIATE—Conduct research in the area of lipid metabolism in platelets and the role of platelet lipids in hemostasis and thrombosis. Requirements include Ph.D. in biochemistry, 4 years of research experience, and thorough knowledge of plasma membrane purification, isolation of membrane protein, reconstitution of artificial membrane systems, radiolabeling techniques, and lipid-exchange-protein methodology. Forty hours per week; \$25,000 per year. Send résumé to: **W. Healey, Job Order Number 3072, Division of Employment Security, C. F. Hurley Building, Government Center, Boston, Mass. 02114. Equal Opportunity Employer, M/F.**

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH—SCIENTIST— ECOLOGY DIVISION LOWER HUTT, NEW ZEALAND

A vacancy exists for a **BIOLOGIST** to study those aspects of physiology which are directly related to the ecology of native and introduced species in New Zealand. Ecology Division anticipates the development of an ecological physiology section to complement and enlarge on the present research activities in the division. We wish to appoint a first-class scientist with an established reputation and experience relevant to the New Zealand fauna. The biologist appointed will develop a new section and will greatly influence its research direction.

Qualifications: An M.Sc. or Ph.D. required with relevant research and experience.

Salary: Up to NZ\$33,333 per annum, dependent upon qualifications and experience.

Further information, applications forms, and so forth, may be obtained from: **The Ambassador, New Zealand Embassy, Washington, D.C.** Applicants should quote vacancy number 4587 and forward applications, accompanied by a résumé, to:

The Ambassador
New Zealand Embassy
37 Observatory Circle, NW
Washington, D.C. 20008

Applications must be received at the above address by 21 January 1983.

STAFF OFFICER: The Commission of Life Sciences of the National Research Council is seeking a Ph.D. or equivalent with at least 3 years of post-Ph.D. experience in the field of ecology or environmental science to serve part-time (full-time employment possible) as staff officer to a committee examining the application of ecological theory to the preparation and interpretation of environmental impact statements. Individual should have demonstrated relevant scientific background and, preferably, experience in dealing with science/public policy issues such as NEPA, and administrative and communication skills. Please send résumé to: **Dr. Alvin G. Lazen, Executive Director, Commission of Life Sciences, National Research Council, 2102 Constitution Avenue, NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

POSITIONS OPEN

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Environmental Biology, is seeking qualified candidates for four positions: **One Program Director and one Associate Program Director in Systematic Biology; one Program Director in the Ecology Program; and one Program Director in the Population Biology and Physiological Ecology Program.** The incumbents to these positions will administer programs for basic research grant support, including advising applicants, reviewing proposals, and other administrative duties. The positions will be filled on a rotational basis for 1 or 2 years and are excepted from the competitive civil service at grades GS-13/14 (equivalent to GS-13/14), \$34,930 to \$53,661 for the associate program director position, and GS-14/15 (equivalent to GS-14/15), \$41,277 to \$63,115 (limited by statute to \$57,500) per annum for the program director positions. (The associate program director position has the potential for conversion to permanent assignment at the same or at program director level.) Candidates should have a Ph.D. and equivalent research experience. In addition, 4 to 6 years of research and administrative experience beyond the Ph.D. is required for the associate program director position and 6 to 8 years of research and administrative experience beyond the Ph.D. for the program director positions. Résumés should be submitted to: **The National Science Foundation, Personnel Administration Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglia, EX 83. NSF is an Equal Opportunity Employer.**

THE INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY, P.O. BOX 30772, NAIROBI, KENYA.

RESEARCH SCIENTIST (TSETSE ECOLOGY)—REFERENCE SCI/82/8. Applications are invited from suitably qualified persons to join the tsetse ecological research team based at Nairobi, Kenya. The successful candidate will be expected to work on tsetse population dynamics, including pupal ecology. A Ph.D. in insect ecology is required. Rank and compensation will depend upon the candidate's qualifications. The International Centre of Insect Physiology and Ecology (ICIPE) is sponsored by a number of donors, including national and international assistance agencies. Applications giving information on general education, professional qualifications and experience, marital status, age, present terms of employment (including salary and benefits), names and addresses of four referees (one being personal), and photocopies of relevant certificates and diplomas (which will not be returned) should be addressed to: **THE AG. ADMINISTRATIVE MANAGER, ICIPE RESEARCH CENTRE, P.O. BOX 30772, NAIROBI, KENYA**, to reach him not later than 31 December 1982.

VICE PRESIDENT FOR RESEARCH LEHIGH UNIVERSITY

Applications and nominations are sought for the position of vice president for research. The vice president for research is responsible for encouraging and promoting research at the university. He or she is a member of the president's staff and reports formally to the provost and through the provost to the president.

The vice president for research directs the office of research and the office of research program development. The office of research assists faculty in the development of proposals, in negotiations with contracting agencies, and in the financial management of grants. The office of research program development assists faculty in finding funding sources and coordinates the university-industry and liaison programs. Directors of research centers and institutes report to the vice president for research. He or she chairs the research council and administers various internal research funds. The vice president for research develops and implements policy for research personnel, sponsored research, and major new research thrusts of the university.

Qualifications should include an earned doctorate, experience with funded research, and successful experience in a senior administrative position. Applications should include complete curriculum vitae and the names and addresses of three references who may be contacted. Applications and nominations should be sent no later than 15 January 1983 to the chairman of the search committee: **Professor D. M. Smyth, Cox Laboratory, Building 32, Lehigh University, Bethlehem, Pa. 18015.**

Lehigh University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

PROFESSOR OF POLYMER SCIENCE AND ENGINEERING. The University of Massachusetts invites applications for the position of professor in the Department of Polymer Science and Engineering. Candidates should have a commitment to teaching and be internationally recognized as leaders in the field of synthetic polymer chemistry. The Polymer Science and Engineering Department is a graduate level organization offering the M.S. and Ph.D. degrees. Applicants should send a résumé and the names of at least three references by 1 January 1983 to: **William J. MacKnight, Department of Polymer Science and Engineering, University of Massachusetts, Amherst, Massachusetts 01003. The University of Massachusetts is an Equal Opportunity/Affirmative Action Employer.**

Position in the non-tenured track of **RESEARCH ASSISTANT PROFESSOR** in the Department of Pathology and Laboratory Medicine (Division of Neuropathology).

Candidates should have a M.D. or Ph.D. degree and ongoing research in ligand-receptor interactions in the central nervous system as they apply to transport and mechanisms of actions of hormones, growth factors, and neurotransmitters. Opportunities to perform research within a multidisciplinary environment of neuropathobiology. Candidates must be able to support their own research. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

Applicants should write to:

Dr. Nicholas K. Gonatas
447 Johnson Pavilion/G2
University of Pennsylvania School of Medicine
Philadelphia, Pa. 19104

VERTEBRATE MORPHOLOGIST BROWN UNIVERSITY

Applications are invited for a tenure-track position within the Section of Morphology (Division of Biology and Medicine) at the assistant professor level. Applicants must hold a doctoral degree by time of appointment (1 July 1983) and should provide evidence of a productive research program in functional and/or evolutionary perspectives of vertebrate morphology at the organismal level that has potential for external funding. Main teaching responsibility is the organization and direction of a course in comparative vertebrate anatomy. Ability to contribute to an undergraduate course in embryology or histology is highly desirable. Applicants should submit curriculum vitae, statement of experience and interests in teaching and research, and three letters of recommendation by 15 January 1983 to: **Dr. Glenn C. Conroy, Division of Biology and Medicine, Box G, Brown University, Providence, Rhode Island 02912. An Equal Opportunity/Affirmative Action Employer.**

PROGRAMS

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, and analytical chemistry. Stipends available. Contact: **Graduate Training Director, Department of Pharmacology, Medical University of South Carolina, Charleston, S.C. 29425.**

POSTDOCTORAL PROGRAM DEPARTMENT OF BIOCHEMICAL SCIENCES PRINCETON UNIVERSITY

USPHS-supported **postdoctoral traineeships** in cancer biology and genetics. Candidates must be U.S. citizens or nationals or permanent residents with recent Ph.D. Participating faculty (with interests in biochemistry, molecular biology, and molecular genetics) include: Professors M. A. Bothwell, D. Dressler, S. J. Flint, J. R. Fresco, E. Gilboa, C. Gilvarg, M. E. Hogan, and J. B. Stock. Applicants should send curriculum vitae, references, and research interests to a faculty member or to: **Postdoctoral Program, Department of Biochemical Sciences, Princeton University, Princeton, N.J. 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.**

Ph.D. Biochemists/
Immunologists

M.S. Biochemists/
Immunologists

CANCER PRODUCT DEVELOPMENT

Project Leadership Potential

The Cancer Product Development Group of Abbott Laboratories, an international leader in immunoassay development for cancer patient management, is currently seeking R & D scientists to work on development of assays for tumor markers.

The qualified candidates will have a Ph.D. or M.S. Degree in Biochemistry or Immunology, with an in-depth knowledge of macromolecular purification techniques, of protein biochemistry and of the principles of enzyme and radioimmunoassays. An extremely strong research background with good communication skills and ability to interact with other members of the project team is also required.

Abbott Park, Abbott's headquarters, is located in an attractive suburban area on the Lake Michigan shoreline, 30 miles north of Chicago. We offer an excellent salary and benefits package that includes profit sharing and relocation assistance. For consideration, send resume with salary history in confidence to: **Jeffrey Luke, Corporate Placement.**

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"HEALTH CARE WORLDWIDE"

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Scientific Advisor, Bio Science



American Hospital Supply Corporation is seeking an experienced Bio Scientist to work in its Hospital Applied Research Group located in Southern California.

This position requires an individual with three to six years of clinical/industrial experience involving medical device R & D and an MS or PhD in a biological science. This individual should possess a broad, state-of-the-art training and experience with particular reference to rapid chemical and microbial detection techniques in human physiology. A working knowledge of immunology and recent bio technology advances would be a benefit.

The position requires an ability to work independently and in a multidisciplinary setting that encompasses engineering, chemistry and computer and materials science. The successful candidate will have responsibility for developing new business opportunities in Bio Science via both in-house and outside research efforts.

If you possess the above qualifications and desire a challenging and responsible position, please send resume outlining professional background in complete confidence to:

S. Deitch

American Hospital Supply Corporation

P.O. Box 1300
Glendale, CA USA 91209

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PROGRAMS

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **The Dean of Admissions, The New England College of Optometry, Room 1201, 424 Beacon Street, Boston, Mass. 02115.**

ADVANCED STUDY PROGRAM IN CLINICAL NEUROPSYCHOLOGY

The Clinical Psychology and Neurosciences and Education programs of Teachers College, Columbia University, co-sponsor a new competency-based program in clinical neuropsychology. Enrollment may be full-time or half-time. Study is individualized, based on an assessment of current competencies and the specification of those that are to be acquired. Supervised clinical practicum is required. **Candidates must hold a doctorate in psychology and be eligible for licensure.** Contact: **Dr. Ursula Kirk or Dr. Catherine Best, Neurosciences and Education, Box 142, Teachers College, Columbia University, New York, New York 10027.**

ADVANCED STUDY PROGRAM IN NEUROSCIENCES AND EDUCATION

This new interdisciplinary, competency-based program is designed to develop the skills required to integrate and apply knowledge of the neural bases of behavior to problems and issues in education and rehabilitation. Professionals from educational and health-related fields may enroll on a full-time or half-time basis. Study is individualized, based on an assessment of current competencies and the specification of those that are to be acquired. Supervised practicum is required. **Candidates must hold a doctorate and be eligible for certification/licensure in their specialty area.** Contact: **Dr. Ursula Kirk or Dr. Catherine Best, Neurosciences and Education Program, Box 142, Teachers College, Columbia University, New York, New York 10027.**

FELLOWSHIPS

Applications are invited for a **POSTDOCTORAL FELLOWSHIP** in applied plant physiology, tenable for 3 years. The successful applicant will be expected to study the effects of acid rain on photosynthesis, gaseous and water movements in crop plants. Applicants should be thoroughly familiar with the theoretical aspects of the subject and the appropriate instruments required to study transport processes in plants. Salary is approximately \$19,000. Further particulars are available from: **Dr. R. L. Jefferies, Department of Botany, University of Toronto, Toronto, Ontario, Canada M5S 1A1**, to whom curriculum vitae and three letters of reference should be sent by 28 February 1983.

GRADUATE TRAINING IN PHARMACOLOGY. Research training and course work leading to the Ph.D. degree, realistically designed for career opportunities in this expanding field. Major departmental research programs include: molecular cardiovascular, renal, and nervous system pharmacology; the toxicology of therapeutic and environmental agents including drugs of abuse; clinical pharmacology. A limited number of fellowships offering tuition and a stipend of \$6,000 are available. Early application for September 1983 is advised. Apply to: **Director of Graduate Studies, Department of Pharmacology and Therapeutics, Medical School, State University of New York at Buffalo, 127 Farber Hall, Buffalo, N.Y. 14214.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH AWARD

A 2-year award is available immediately for a person with experience in molecular genetics to study the regulation of gene expression in *Drosophila*. Candidates must have demonstrated expertise in using recombinant DNA techniques to isolate and characterize genes. Candidates will be interviewed starting 1 January. Send curriculum vitae and names of references to: **Dr. Victoria Finnerty, Department of Biology, Emory University, Atlanta, Ga. 30322.** Emory University is an Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

FELLOWSHIPS IN TUMOR BIOLOGY

The University of Rochester Cancer Center invites candidates for postdoctoral training in applications of drug and radiation therapies on experimental tumor models. Studies involve characterization of tumor cell subpopulations using flow cytometry, cell sorting, and centrifugal elutriation. Effects of radiation, chemotherapeutic agents, sensitizers, protectors, and hormones are being evaluated. In our medical physics program NMR and computerized tomography are being utilized for tissue imaging. Other programs include molecular biology, in which control of gene expression is being investigated using molecular cloning and DNA sequencing, and immunology utilizing specific immunotherapy and monoclonal antibodies. Applicants are requested to send their curriculum vitae and three letters of reference to: **Dr. Edgar Henshaw, Assistant Director of the University of Rochester Cancer Center, Box 704, 601 Elmwood Avenue, Rochester, N.Y. 14642.**

TRAINEESHIPS

TRAINEESHIPS—POSTDOCTORAL FELLOWSHIP IN ENVIRONMENTAL TOXICOLOGY AND PATHOLOGY

Fellowship positions funded by an NIH training grant are available immediately. Research areas include the mechanisms of chemical carcinogenesis, the metabolism of environmental toxicants, and the neurotoxicology of environmental agents such as insecticides and heavy metals. Extensive research along this line is in progress in the Departments of Pharmacology and Pathology. The applicants must be U.S. citizens or permanent residents, and must hold a Ph.D., M.D., or equivalent degree or be expected to receive the degree. Send a letter stating a specific area of interest, curriculum vitae, and three reference letters to: **Dr. Toshio Narahashi, Program Director, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611.** Telephone: 312-649-8284. An Affirmative Action/Equal Opportunity Employer.

CONGRESS

The **SIXTH ANNUAL MEDICAL CONGRESS** organized by the faculty of Medicine, Ain-Shams University, Cairo, will be held at the premises of the Faculty at Abbassia, Cairo, during the period 4 to 7 March 1983.

The main theme of the Congress will be "Coagulation and Haemorrhage", but other medical subjects will also be presented in a special session. Interested physicians are cordially invited to participate in this important scientific meeting. Requests for the application forms and the first circular should be sent to:

**Professor Salah Eid
Coordinator General**

**Sixth Annual Ain Shams Medical Congress
P.O. Box 38
Abbassia, Cairo, Egypt**

SYMPOSIUM

CONTEMPORARY PROBLEMS IN PLANT ANATOMY

**DUKE UNIVERSITY and THE UNIVERSITY
OF NORTH CAROLINA AT CHAPEL HILL,
DURHAM AND CHAPEL HILL, N.C.**

28 February, 1 and 2 March 1983

The symposium, sponsored by the National Science Foundation and the host institutions, will emphasize the current state of knowledge in four areas of plant anatomical research: ecological and systematic anatomy, leaf development, flower development, and differentiation at the shoot apex. Distinguished researchers who are active in each area have been selected to speak. All sessions are open to the public and those persons interested in attending are invited to write for further information, registration forms, and the scientific program. Write: **Dr. R. A. White, Plant Anatomy Symposium, Department of Botany, Duke University, Durham, N.C. 27706.** Telephone: 919-684-6438.

SCIENTIFIC EXCHANGES

NAS SCIENTIFIC EXCHANGE PROGRAMS WITH USSR AND EASTERN EUROPE

Applications are invited from American scientists who wish to make professional visits in the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia between January and December 1984. Applicants must be U.S. citizens and have a doctoral degree in the natural, biomedical, or social and behavioral sciences by the time of visit. Deadline for requesting applications is Tuesday, 1 March 1983. Please contact:

**Section on USSR and Eastern Europe
National Academy of Sciences
2101 Constitution Avenue, NW
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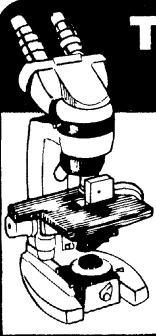
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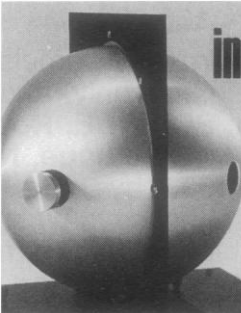
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Japanese Client Liaison Representative

— CONTRACT TOXICOLOGY

Since our establishment thirty years ago Huntingdon Research Centre has built a high scientific reputation and a world wide business in biological safety testing for the pharmaceutical, chemical and allied industries. From our established, sound business base with Japanese clients we are planning further significant growth and to this end seek an additional representative for our Tokyo office.

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- a self-starter, with the capacity and determination to acquire our complex product knowledge quickly.
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- most important, with Japanese mother tongue and fluent English both written and spoken.

Please submit your detailed curriculum vitae and salary history to the Personnel Director, Huntingdon Research Centre, Huntingdon, Cambridgeshire, England.



Huntingdon Research Centre



Head of Biochemistry

Beckenham : Kent

The Wellcome Foundation Limited is the British-based parent company of an international group of pharmaceutical and chemical companies concerned with the discovery, development, manufacture and distribution of products to promote the health and hygiene of man and animals. The research laboratories are located in Beckenham, Kent. It is the Company's principal UK research site and is set amidst 100 acres of beautiful parkland.

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