

ment into the Yucatán Peninsula of refugees from the culturally precocious but volcano-ravaged lands of El Salvador and Honduras. Migrationism in the explanation of culture history is carried a giant step further in the present study, where the focus is on a hypothesis that, after a 150- to 200-year occupational hiatus following the Ilopango eruption, rapid repopulation of the El Salvador highlands resulted from the organized reverse incursion of Maya groups from the lowlands.

In support of this hypothesis, various authors in the volume point to the seeming lack of human remains in the Valley during the Protoclassic–Early Classic periods, followed by the sudden appearance of sophisticated lowland-related pottery and stone tools at sites dated to the beginning of the Late Classic. The suggestion is that such findings reflect the expansion into the southeastern highlands of Chortí migrants from Copán and other lowland Maya centers, as these people sought to reestablish obsidian and other long-distance commodity procurement networks after the collapse of Teotihuacán. The hard evidence to date from the Zapotitán Valley for a lowland Chortí recolonization is painfully meager—mainly an interpretation of rapid reoccupation at the one partially excavated Late Classic domestic complex, which apparently was inhabited by high-status individuals, judging from their lowland-like elite material culture and their ability to procure exotic trade goods such as polychrome pottery and obsidian.

Mass migration is difficult enough to document archeologically under the best of circumstances, and in this case there are simply not yet sufficient data to test the hypothesis convincingly. Even if it could be shown that widespread abandonment of the highlands ensued after the Ilopango eruption, leaving few or no remnant groups, it would be uncertain whether an economically motivated Chortí takeover was responsible for resettlement. An alternative suggested by Hummer, another project member, is that the Late Classic recovery can be explained as part of a gradual, population-pressure-induced expansion of outlying lowland Maya agriculturalists. Thwarting a solution to this question is the limited extent of the project's surface survey (not to mention the dearth of similar surveys in adjacent areas) and thus an inability to demonstrate adequately the extent of the post-Ilopango highland abandonment and the sequence of reoccupation. One wonders if a more encompassing survey would be very

meaningful even if implemented, considering the deep ash layers from subsequent eruptions that cap any hypothesis-disconfirming Early and Middle Classic sites.

Finally, I think little was gained by the study through its appeal to "hazard theory," defined as a subarea of human ecology dealing with the ways people adjust to natural disasters. The attempt to "exploit the methods, approaches, and generalizations derived from that research" added few new insights into the Late Classic prehistory of the highlands beyond the commonsense recognition that people faced with agricultural collapse in their burned-out, ash-covered homeland might have moved on and that they, or others, would likely have reoccupied the area when conditions ameliorated. Moreover, the use of "hazard theory," with its emphasis on behavioral responses such as "loss absorption, loss acceptance, loss reduction, and radical action," seems singularly inappropriate to an explanation of recolonization by peoples disassociated from the disaster by as much as 200 years, peoples perhaps lacking an appreciation of the recurrent potential of volcanism and therefore unconscious of the true risks attendant on highland living.

What is most needed in the study of this intriguing question is not a new behavioral model but simply many more archeological data showing the full spatial and temporal extent of highland, lowland, and intermediate cultures in the centuries following the Ilopango eruption that we may test hypotheses already extant. The research of Sheets and his collaborators has significantly advanced this objective, and it is apparent from the 1979–80 geophysical reconnaissance at the Cerén site reported by Loker in the present volume that there is important evidence still waiting to be recovered. In this we have yet another reason to hope for more tranquil times ahead in El Salvador, politically as well as geologically.

ROBERT N. ZEITLIN

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Books Received

Accidental Exposure to Dioxins. Human Health Aspects. Frederick Coulston and Francesco Pocchiarri, Eds. Academic Press, Orlando, Fla., 1983. xiv, 295 pp., illus. \$24.50. Ecotoxicology and Environmental Quality Series. From a forum, Bethesda, Md., Oct. 1981.

Bridge to the Future. A Centennial Celebration of the Brooklyn Bridge. Margaret Latimer, Brooke

Hindle, and Melvin Kranzberg. New York Academy of Sciences, New York, 1984. xiv, 355 pp., illus. Paper, \$75. Annals of the New York Academy of Sciences, vol. 424. From a symposium, New York, May 1983.

The Cannabinoids. Chemical, Pharmacologic, and Therapeutic Aspects. Stig Agurell, William L. Dewey, and Robert E. Willette, Eds. Academic Press, Orlando, Fla., 1984. xxii, 909 pp., illus. \$88. From a meeting, Louisville, Ky., Aug. 1982.

Dual Addiction. Pharmacological Issues in the Treatment of Concomitant Alcoholism and Drug Abuse. Mary Jeanne Kreek and Barry Stimmel, Eds. Haworth, New York, 1984. viii, 120 pp., illus. \$22.95. Also published in *Advances in Alcohol and Substance Abuse*, vol. 3, No. 4.

Earthfire. The Eruption of Mount St. Helens. Charles Rosenfeld and Robert Cooke, MIT Press, Cambridge, Mass., 1984. xiv, 155 pp., illus. Paper, \$9.95. Reprint, 1982 edition.

Future Survey Annual 1983. A Guide to the Recent Literature of Trends, Forecasts, and Policy Proposals. Michael Marien and Lane Jennings, Eds. World Future Society, Bethesda, Md., 1984. xiv, 240 pp. Paper, \$25.

Ganglioside Structure, Function, and Biomedical Potential. Robert W. Ledeen *et al.*, Eds. Plenum, New York, 1984. xii, 649 pp., illus. \$89.50. *Advances in Experimental Medicine and Biology*, vol. 174. From a symposium, Parksville, British Columbia, July 1983.

Hydroxyanisole. Recent Advances in Anti-Melanoma Therapy. P. A. Riley, Ed. IRL Press, Washington, D.C., 1984. viii, 248 pp., illus. Paper, \$38. From a symposium, London, Sept. 1982.

Icosanoids and Cancer. Hélène Thaler-Dao, André Crastes de Paulet, and Rodolfo Paoletti, Eds. Raven, New York, 1984. xx, 289 pp., illus. \$50.50. From a symposium, Ile de Bendor, Sept. 1983.

Lymphokines. A Forum for Immunoregulatory Cell Products. Vol. 8. Edgar Pick, Ed. Academic Press, Orlando, Fla., 1983. xx, 452 pp., illus. \$57.

Mammalian Cell Culture. The Use of Serum-Free Hormone-Supplemented Media. Jennie P. Mather, Ed. Plenum, New York, 1984. xviii, 284 pp., illus. \$39.50.

Management Operations of the National Cancer Institute That Influence the Governance of Science. Vincent T. DeVita, Jr., and Louis M. Carrese, Eds. National Cancer Institute, Bethesda, Md., 1984 (available from the Superintendent of Documents, Washington, D.C.). x, 139 pp. \$9. National Cancer Institute Monograph 64.

Nutritional Surveillance. John B. Mason *et al.* World Health Organization, Geneva, 1984 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). 194 pp., illus. Paper, \$10.50.

Observing the Universe. Nigel Henbest, Ed. Basil Blackwell, New York, and *New Scientist*, London, 1984. xvi, 288 pp., illus. \$19.95; paper, \$8.95. *New Scientist* Guides.

Psychosocial Stress. Trends in Theory and Research. Howard B. Kaplan, Ed. Academic Press, Orlando, Fla., 1983. xvi, 346 pp. \$36. From a conference, Mexico City, Aug. 1982.

The Quantum Theory of Unimolecular Reactions. H. O. Pritchard. Cambridge University Press, New York, 1984. xvi, 175 pp., illus. \$49.50.

The Role of Extracellular Matrix in Development. Robert L. Trelstad, Ed. Liss, New York, 1984. xviii, 643 pp., illus. \$76. From a symposium, Irvine, Calif., June 1983.

Salinity Tolerance in Plants. Strategies for Crop Improvement. Richard C. Staples and Gary H. Toennissen, Eds. Wiley-Interscience, New York, 1984. xviii, 443 pp., illus. \$49.95. From a conference, Bellagio, Italy.

Terra Non Firma. Understanding and Preparing for Earthquakes. James M. Gere and Hareesh C. Shah. Freeman, New York, 1984. xii, 203 pp., illus. \$19.95; paper, \$11.95. Originally published in *Portable Stanford Series*.

The Light-Hearted Astronomer. Ken Fulton. AstroMedia, Milwaukee, 1984. viii, 115 pp. Paper, \$6.95.

Theory of Natural Selection and Population Growth. Lev R. Ginzburg. Benjamin/Cummings, Menlo Park, Calif., 1983. xvi, 160 pp., illus. \$21.95. *Series in Evolution Biology*, Institute of Ecology, University of California, Davis.

Thesaurus of Rock and Soil Mechanics Terms. Compiled by J. P. Jenkins and A. M. Smith. Pergamon, New York, 1984. x, 62 pp. Paper, \$15.

Tilapia Fishes of the Genera *Sarotherodon*, *Oreochromis* and *Danakilia*. Ethelwynn Trewavas. British Museum (Natural History), London, and Comstock (Cornell University Press), Ithaca, N.Y., 1984. xii, 583 pp., illus. \$95.

Time, Space and Things. B. K. Ridley. 2nd ed. Cambridge University Press, New York, 1984. x, 182 pp., illus. \$29.95; paper, \$9.95.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

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POSITIONS WANTED

Biologist, B.S. May 1985 seeks graduate assistantship in physiology or pharmacology beginning summer/fall 1985. Extensive undergraduate research experience in both areas. Also experience with animal surgery. Box 239, SCIENCE. 10/12, 19

Chemical Engineer: Areas of responsibility include: New organic chemical research and evaluation, new product development, pilot equipment design and set up, quality improvement participation. Proven management of microelectronic, pharmaceutical, high-performance polymer, and heavy metal chelation projects. Box 240, SCIENCE. X

Immunochemist/Biotechnologist, Ph.D. 1979. Presently Director, R/D laboratory in biotechnology company. Background: Immunoregulation, idiotypes, chemical modifications, electrofusions. Seeks senior level position/industry, Box 231, SCIENCE. 10/12, 19

Immunologist, Ph.D. 1978. Postdoctoral training. Four years of industrial experience, including biotechnology company start-up. Seeking industrial research position. Training and experience in cellular immunology, hybridoma/monoclonal antibody technology, immunoassay development, parasite immunology, and infectious diseases. Box 232, SCIENCE. 10/12

Ph.D., Pharmacologist. Six years of industrial experience with expertise in cancer chemotherapy, anti-metastasis, reverse transformation, and carcinogenesis research. Desires industrial research position. Box 238, SCIENCE. 10/12, 19, 26; 11/2

Toxicologist/Clinical Chemist, M.T., Specialist in chemistry (ASCP), Ph.D., ABCC Board-certified in toxicology and clinical chemistry. Extensive experience in laboratory service, research, development, and teaching. Seeking laboratory, academic, or research position. P.O. Box 261327 San Diego, California 92126. X

POSITIONS WANTED

Immunologist, Ph.D. 1970. University research experience in cellular immunity in infectious disease, lymphocyte mediated target cell killing, lymphokines, and hybridomas in targeted chemotherapy. Excellent publications and references. Mature dedicated individual seeks academic faculty position. Box 233, SCIENCE. 10/12, 19

Molecular/Cell Biologist, Ph.D. 1984. Immunoelectromicroscopy. Protein modification, chromatographic, electrophoretic, and immunochemical characterization. Toxicology. Microsurgery. Teaching experience. Publications. Interested in additional modern molecular biology "Know How." Seeks postdoctorate. Box 235, SCIENCE. 10/12, 19, 26

Marine Invertebrate Zoologist/Systematist/Benthic Ecologist, Ph.D. 1972. Numerous journal publications; administrative, organizational, editorial, communicatory, and supervisory skills; extensive research, field, teaching, and consulting experience. Seeks teaching and/or research position in academia, museum, private laboratory, or government. Reply: Box 226, SCIENCE. 10/12

Pharmacologist, Ph.D. 1971. Former university and now industrial researcher with extensive background in calmodulin, microtubules, and chemotherapeutic agents. Also some experience in endocrine, neuropharmacology, trace metals, enzyme kinetics, and RIA. NIH postdoctorate. Excellent publications and proven high performance thinking ability. Seeks position with university, research institute, or industry. No geographic preference. Box 228, SCIENCE. 10/12, 19, 26

Writer/Editor. Ecology doctorate with publications, research, and teaching experience seeks freelance writing and editing in all life science areas. 916 Marsh Street, Mankato, Minn. 56001. 10/12, 19

POSITIONS OPEN

Tulane University School of Medicine is searching for an **ACADEMIC NEUROLOGIST** with interest and training in clinical neurophysiology, epilepsy, and/or sleep disorders. Academic rank and salary dependent on qualifications. Teaching and research both highly valued and research time will be protected. Please send curriculum vitae to: **Joseph B. Green, M.D., Chairman, Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112** by 30 October 1984. *Tulane is an Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.*

The Department of Radiation Therapy of Rhode Island Hospital, a teaching unit of Brown University, is recruiting for full-time **ACADEMIC STAFF** at two levels: (i) **Professor/associate professor** (total two positions); (ii) **Instructor/assistant professor** (total two positions). The department opened in 1973 and is staffed by a complement of eight certified radiation therapy technologists. The department is equipped with the latest therapy units including a 10-MeV, 6-MeV, and a 4-MeV linear accelerator. The department has a Toshiba Simulator with fluoroscopic capability and transverse tomography. There is a full-time physics staff. Inquiries for these positions should be directed to: **Dr. Melvin Tefft, Rhode Island Hospital, Department of Radiation Therapy, 593 Eddy Street, Providence, R.I. 02902.** Applications for associate professor and full professor must be submitted no later than 1 November 1984 and those for instructor and assistant professor no later than 1 March 1985.

Environmental Science and Engineering, Inc., an international environmental consulting company, currently has the following position open:

AQUATIC TOXICOLOGIST

Responsibilities to include marketing and management of chronic, partial life cycle and reproductive aquatic toxicology studies of pure compounds and compound mixtures, design and construction of diluter systems for pure compound testing, and conducting risk assessments of chemicals including hazardous wastes. Position requires M.S., or equivalent, in aquatic toxicology or related field, and 3 years of experience in management, proposal writing, client development, and knowledge of U.S. EPA, FDA, TSCA, and CPSC regulations.

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

P.O. Box ESE Department S9
Gainesville, Fla. 32602

An Equal Opportunity Employer

POSITIONS OPEN

MONTANA STATE UNIVERSITY (MSU) seeks applications for the position of **ADJUNCT ASSISTANT PROFESSOR** to teach **ANATOMY** and to develop a research program which complements a graduate program in **NEUROBIOLOGY**. The appointment is nontenure-track until September 1986, with the possibility of conversion to a tenure-track position at that time. The academic appointment is in the Biology Department with 50 percent responsibilities in the WAMI Program (Washington, Alaska, Montana, Idaho Regionalized Medical Education, offered in association with the University of Washington School of Medicine). Annual teaching responsibilities include a one-quarter gross anatomy course for first year medical students and one to two appropriate undergraduate courses within a broad-based Biology Department. Applications or inquiries for additional information should be addressed to: **D. Phillips, Biology Department, Montana State University, Bozeman, Mont. 59717;** telephone: 406-994-3230. Applications should include a letter of application, curriculum vitae, and names of three references. Deadline for application is 23 November 1984. Preferred starting date is March 1985.

MSU is an Equal Opportunity/Affirmative Action Employer and encourages applications from female, minority, and disabled persons.

VACANCY: INT/002/84 AGRONOMIST

The Small Ruminant Programme of the International Livestock Centre for Africa seeks an agronomist to be based in Ibadan, Nigeria. The programme is focussed on small scale sheep and goat production systems for humid West Africa and heavy emphasis is placed on browse and fodder trees.

The successful applicant will have a Ph.D. in agronomy and experience in forage production, agroforestry, or farming systems research. He or she will also be capable of carrying out agronomic trials and applying the results to village cropping and husbandry systems.

We are seeking an individual who can work as part of a small interdisciplinary team and who is able to develop innovative approaches to research on small holder animal production. An interest in links between forage production and its utilisation by the animal is essential. West African experience and French language are desirable.

Salary and related benefits negotiable in line with comparable international organisations.

Applicants should airmail personal history and names of three referees.

Applications citing the reference number should be sent by 15 November 1984 to: **The Head of Personnel Department, International Livestock Centre for Africa, P.O. Box 5689, Addis Ababa, Ethiopia.**

Applications are invited for an **ASSISTANT PROFESSOR** position in genetics, beginning in September 1985. Candidates should have a Ph.D. degree (received since 1980), postdoctoral experience, and demonstrated accomplishments in research. Applicants in several sub-specialties will be favorably considered. These include mammalian molecular genetics, prokaryotic genetics, neurogenetics, viral genetics, and plant genetics. Interested candidates should submit curriculum vitae, a description of research plans, and the names of three referees to:

Chairman, Search Committee
Department of Genetics, SK-50
University of Washington
Seattle, Washington 98195

The University of Washington is an Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR—The Department of Biology at Northeastern University invites applications for a tenure-track position in biochemistry to begin in September 1985. The department is growing and implementing new programs in biochemistry and molecular biology at the undergraduate and graduate levels. Applicants must be committed to excellence in research and teaching and must have demonstrated excellence through postdoctoral work. Applicants at the associate professor level must have a record of successful external funding for research and must present evidence of significant scholarly productivity. Closing date: 23 November 1984. Submit letter of application, curriculum vitae, a description of future research plans, and names of three references to: **Dr. Phyllis R. Strauss, Department of Biology, Northeastern University, 360 Huntington Avenue, Boston, Massachusetts 02115.** *Northeastern University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ANATOMIST—The Department of Anatomy is seeking applicants for a teaching position in **GROSS ANATOMY**; research area open, Ph.D., M.D., or both degrees, at least 1 year of postdoctoral research, and demonstrated excellence in research are required. Rank and salary are negotiable, depending upon experience. Tenure-track. Position available 1 July 1985. Submit curriculum vitae and letters of reference by 15 December 1984 to: **Dr. Robert D. Yates, Chairman of Anatomy, Tulane Medical School, 1430 Tulane Avenue, New Orleans, Louisiana 70112.** *Tulane is an Equal Opportunity/Affirmative Action Employer. Applications from qualified women and qualified minority members are encouraged.*

The Department of Psychiatry of the University of Michigan has a tenure-track faculty (instructor to professor) position as **ASSOCIATE CHIEF, PSYCHIATRIC EMERGENCY SERVICES.** Duties include direction of a psychiatric emergency program involving walk-in patients, consultation to medical/surgical emergency room, administrative responsibilities for support staff, liaison with community mental health system, and supervision of psychiatric residents and medical students working in the emergency room. Requires interest and demonstrated abilities in crisis intervention, emergency evaluations, medical psychiatry, teaching, and supervision. Research background desired; programmatic, grant-supported health services research is now ongoing and medical psychiatric research is planned. Board-certification in psychiatry or eligibility to take boards is a requirement. Salary range dependent on academic rank. Please send curriculum vitae to: **David J. Knesper, M.D., Chief, Psychiatric Emergency Services, Department of Psychiatry, University of Michigan Hospitals, Room C-7056, Box 54, 1405 East Ann Street, Ann Arbor, Michigan 48109.**

The University of Michigan is an Affirmative Action Employer.

ASSISTANT PROFESSOR. Applicants must hold Ph.D., preferably in biochemistry, and have postdoctoral training in area of research expertise. Research specialty preferred is **MOLECULAR IMMUNOLOGY.** Other specialties which will be considered include **MEMBRANE BIOCHEMISTRY** and **BIOCHEMICAL REGULATION.** The ability to develop an extramurally funded research program is required. The successful applicant must be qualified to effectively teach biochemical subjects outside his area of research to both medical and graduate students. This 12-month, tenure-track position will be filled on 1 January 1985. Send curriculum vitae, brief summaries of present and proposed research, and names of three people who may be contacted for reference to: **Dr. F. P. Inman, Department of Biochemistry, P.O. Box 19930A, Johnson City, Tenn. 37614.** *East Tennessee State University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR BIOCHEMISTRY AND BIOPHYSICS

The Department of Biochemistry and Biophysics at the University of Pennsylvania School of Medicine invites applications for one or two positions at the level of assistant, or in exceptional cases, associate professor. Candidates with interests in molecular aspects of **cellular, neural, and developmental biology** are especially encouraged to apply; however, outstanding candidates in all areas of contemporary biochemistry and biophysics will be given serious consideration.

The applications should include a brief statement of current and proposed research interests, curriculum vitae, bibliography, and representative reprints. In addition, at least three letters of recommendation should be sent separately.

Send all correspondence to:

**The Search Committee
Department of Biochemistry and Biophysics
University of Pennsylvania, School of Medicine
Philadelphia, Penn. 19104**

Deadline for applications is 31 December 1984.

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

The Department of Genetics at Washington University School of Medicine, St. Louis, Missouri 63110, invites applications at the level of **ASSISTANT PROFESSOR** from persons whose primary research interests include molecular genetics in humans or other mammals, mammalian viruses, or somatic cells. Interested parties should forward to: **Daniel L. Hartl** at the above address, a résumé, a brief statement of research interests, and the names of three people who would provide recommendations. *Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSITIONS OPEN

ASSISTANT PROFESSOR/RESEARCH ASSOCIATE

Research faculty position available in Department of Medicine, Columbia University. Research involves study of arachidonic acid metabolism (cyclooxygenase and lipoxygenase products) in blood vessels and vascular cells. Candidates must have M.D. or Ph.D. in biochemistry or pharmacology and postdoctoral research experience. Laboratory skills sought include cell culture, HPLC, RIA GC-mass spectrometry. Send curriculum vitae, statement of research interests, and two letters of reference to: **Dr. Paul J. Cannon, Department of Medicine, Columbia University, 630 West 168 Street, New York, N.Y. 10032.** *An Equal Opportunity/Affirmative Action Employer.*

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES UNIVERSITY OF CALIFORNIA, DAVIS

Inquiries are invited from qualified applicants for a faculty position (tenure-track) available in this area:

ASSISTANT PROFESSOR OF ANIMAL SCIENCE. Research, teaching, and advising in the areas of animal breeding and genetics. Apply to: **R. C. Laben, Department of Animal Science,** by 15 January 1985. Position available 1 July 1985 or earlier.

This position is to be filled at the assistant professor, 11-month salary level. The position has responsibilities for teaching, advising, and research (in the Agricultural Experiment Station). Candidates should have a Ph.D. in an appropriate field and teaching and research experience. Applicants should submit résumé, transcripts (if within 5 years of graduation), statement of research and teaching experience, list and reprints of publications, and the names and addresses of at least three persons familiar with the applicant's qualifications, to individual and department as noted for position, **University of California, Davis, California 95616.** Please indicate the position in which you are interested. The completed application must be received by date indicated. *In accordance with applicable state and federal laws and university policy, the University of California does not discriminate in any of its policies, procedures, or practices on the basis of race, color, national origin, religion, sex, sexual orientation, handicap, age, veterans status, medical condition (as defined in Section 12926 of the California Government Code), ancestry, or marital status; nor does the university discriminate on the basis of citizenship, within the limits imposed by law or university policy. In conformance with applicable law and university policy, the University of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—BIOCHEMISTRY. The Department of Chemistry at Boston University is seeking applicants for a tenure-track position to begin by 1 September 1985. Responsibilities include teaching of biochemistry courses and development of a vigorous research program, preferably in the area of membrane chemistry, immunochemistry, recombinant DNA technology, or plant biochemistry. Outstanding applicants in any field will be considered, however. Résumé, research plan, and three letters of recommendation should be sent to: **Dr. Dan Dill, Chair, Department of Chemistry, Boston University, Boston, Mass. 02215.** *An Equal Opportunity/Affirmative Action Employer.*

The Department of Microbiology, University of Minnesota, Minneapolis campus, invites application for **THREE** separate 12-month, tenure-track appointments at the rank of **ASSISTANT PROFESSOR**, one in each of the following areas of interest: (i) molecular basis of immune function; (ii) molecular mechanisms of microbial pathogenesis; and (iii) microbial or cellular developmental microbiology. Candidates must have a doctoral degree, with two or more years of postdoctoral research experience. Successful candidates will be expected to obtain extramural research funding and participate in departmental teaching responsibilities, including supervision of graduate students at the M.S. and Ph.D. levels. Please send a brief description of research interests and plans, curriculum vitae, and three letters of recommendation to the chairman of the appropriate search committee: **P. M. Schlievert** (immunology); **P. P. Cleary** (microbial pathogenesis); and **M. Dworkin** (developmental microbiology), **Department of Microbiology, University of Minnesota Medical School, 420 Delaware Street, SE, Box 196 Mayo, Minneapolis, Minn. 55455.** Last date for receipt of applications is 31 December 1984. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

Emory University, Department of Chemistry announces the reopening of a search to fill a tenure-track position in biological and biomedical applications of NMR. We seek candidates at either the **ASSISTANT OR ASSOCIATE PROFESSOR** level with background and training in physical or biophysical chemistry. Teaching responsibilities will be in the undergraduate program and in graduate courses in the successful candidate's special field. The faculty member will be expected to develop an outstanding research program and will have the opportunity for interdisciplinary collaborative research with other programs in the biological and biomedical area. Facilities available for this position include dedicated high-field NMR instrumentation (300 MHz WB). Postdoctoral experience is desirable. Applicants should submit curriculum vitae, a publication list, three letters of recommendation, and a concise description of proposed research to: **Professor David Goldsmith, Department of Chemistry, Emory University, Atlanta, Ga. 30322.** Applications should be received by 26 October 1984. *Applications from women and minority groups are encouraged. Emory University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—DEVELOPMENTAL BIOLOGY: Tenure-track position beginning September 1985: To teach an introductory and an advanced level course in developmental biology, participate in a team-taught introductory biology course, and engage in research which encourages participation by undergraduates. Preference for an emphasis on molecular biology with postdoctoral research experience. Send curriculum vitae, statement of research and teaching interests, and three letters of reference by 16 November 1984 to: **Dr. William L. Steinhart, Biology Department, Bowdoin College, Brunswick, Maine 04011.** *An Affirmative Action/Equal Opportunity Employer.*

University of Utah, Salt Lake City, Utah 84112. Professor R. W. Parry, Chairman, Search Committee, Department of Chemistry, 150 HEB.

TENURE-TRACK INORGANIC FACULTY opening at the **ASSISTANT PROFESSOR** level. Candidates are invited to submit a résumé, a statement of research plans, and three letters of recommendation. The department has acquired much new instrumentation of particular interest to inorganic chemists during 1984 [ESR with ENDOR: 500 and 300 (two) MHz NMR's], and has a permanent staff Ph.D. crystallographer. Resources and services are ideal for the rapid initiation of new research programs. All applications must be postmarked the closing date, 4 November 1984. Later applications may be considered if no qualified candidates have applied by that date. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR IN MICROBIOLOGY

The Department of Bacteriology and Public Health seeks applicants for a tenure-track position at the assistant professor level. Preference will be given to applicants with research interests in the area of microbial pathogenic mechanisms; however, strong applicants in related areas are encouraged to apply. Applicants must have postdoctoral training. The successful candidate will be expected to establish an active research program and participate in graduate and undergraduate teaching. Applicants should submit curriculum vitae, statement of research interests and professional objectives, and names of three references to: **Dr. David J. Hinrichs, Chairman of Search Committee, Bacteriology and Public Health, Washington State University, Pullman, Wash. 99164-4340.** Application deadline: 1 December 1984. *Washington State University is an Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE SOIL SCIENTIST/HORTICULTURIST. The Departments of Agronomy and Soils and Horticulture and Landscape Architecture seek a Ph.D. to conduct research on soil-plant-nutrient relationships of fruit trees with emphasis on the relationships of nutrient status to production, fruit quality, and fruit storage life. Located at the Tree Fruit Research Center, Wenatchee, Washington. Salary commensurate with training and experience. Application review begins 1 December 1984. Submit résumé, transcripts, and names, addresses, and phone numbers of five references to:

**Dr. B. H. Barritt
Tree Fruit Research Center
1100 North Western Avenue
Wenatchee, Wash. 98801**

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Wayne State University

Vice President for Research and Dean of the Graduate School

Wayne State University announces a national search for a Vice President for Research and Dean of the Graduate School. Wayne State University, one of the nation's principal academic centers of basic and applied research, is committed to the revitalization of Michigan's economy, and seeks an experienced investigator and administrator to help integrate this goal more fully into its research agenda.

Substantial resources will support the mission of the Vice President and Dean, including the University's \$20M research and sponsored program enterprise, a major medical campus and biomedical research center, the State's leading Small Business Development Center, and a new business incubator facility for technology-based business development. The University has set aside more than one million dollars for the purchase of research and academic equipment in 1984-85, and the Vice President and Dean will assist the Provost in administering an additional \$650,000 fund for the stimulation and development of research. He or she will be responsible for the overall direction of 45 Ph.D. and 124 Master's programs. The position is supported by a full-time staff of 20 people.

QUALIFICATIONS:

1. Earned doctorate, with a national and/or international reputation in research and scholarship;
2. Proven administrative ability including knowledge of federal and private funding sources and experience in obtaining external research support;
3. Evidence of successful instruction at the graduate level including direction of theses and dissertations (strongly recommended); and
4. Experience in technology transfer and the interaction of universities and industry.

CONDITIONS OF EMPLOYMENT:

The Vice President for Research and Dean of the Graduate School is a full-time position reporting to the Provost. Compensation will be competitive and negotiable.

APPLICATION PROCEDURE:

Letters of application, resumes and names, addresses and telephone numbers of at least three people who may be contacted as references must be received by October 19, 1984. Send letters of application and nominations to:

Dr. Marietta L. Baba, Assistant Provost
and Chair, Interview Panel
Wayne State University
1052 David Mackenzie Hall
Detroit, MI 48202

Wayne State University is an Affirmative Action,
Equal Opportunity Employer.

RESEARCH ASSOCIATE

East-West Center

The East-West Center is an educational institution established in Hawaii by the United States Congress in 1960 "to promote better relations between the United States and the nations of Asia and the Pacific through cooperative study, training and research."

Applications and nominations for an academic staff position in the Environment and Policy Institute are being accepted. The Research Associate position is full-time and is a limited appointment up to three years with the possibility of renewal. All Center programs are multinational and multidisciplinary. Research Associates, along with visiting scholars, professionals, and graduate degree students form teams which work on problems with significant mutual consequences for the United States and nations of Asia and the Pacific. The successful candidate will work on Institute programs dealing with Forest Lands Policy, Natural Systems Assessment, Human Ecology, Agricultural Systems, and Water Resources.

Candidates must have either 1) a Ph.D. in natural science, social science or professional discipline relevant to forest land use and at least five (5) years of appropriate professional or research experience, or 2) a M.S. or M.F. degree and at least ten (10) years of relevant professional or research experience. Experience in the Asia/Pacific region is preferred, and at least some of it must have been in developing countries. Working proficiency in the English language is required.

Cover letter should give examples of experience demonstrating ability to: a) discover new knowledge about natural resource and environmental issues, especially at the international level; b) develop applications of this knowledge, for example, curricula, educational materials, policy aids; c) design and implement research and education projects and activities in a team multinational context; and d) obtain funding and manage a substantial research package.

Salary for academic staff members commensurate with extent of experience and qualifications plus cost-of-living allowance currently at 22.5% (subject to change). All nominees will be contacted to determine interest. Applications with cover letter, complete curriculum vitae, and names and addresses of three professional references must be postmarked by December 1, 1984. Send to Karen Lam, Personnel Office, Dept. 19, East-West Center, 1777 East-West Road, Honolulu, Hawaii 96848.

An Equal Employment Opportunity/
Affirmative Action Employer

DIRECTOR, LIFE SCIENCE LABORATORY

SENIOR LEVEL PROJECT MANAGERS

Syracuse Research Corporation, a multi-disciplinary research institute on the campus of Syracuse University, is re-organizing and expanding its Life Science Laboratory and is seeking:

Director, Life Science Laboratory—a Ph.D. with Lab management experience or equivalent. Must have strong background in government grants and contracts plus some business management experience.

Senior Level Scientists who can conduct independent research and attract grants and contracts from industry and government. Positions require a Ph.D. and/or equivalent experience.

Positions offer challenge and technical responsibility in a stimulating research environment. Attractive salaries and benefits. Central New York location.

Join a team in search of technical excellence!



Send resume in confidence to:

Louise Pitone, Personnel Director
Syracuse Research Corporation
Merrill Lane, Syracuse, NY 13210

Post Doctoral Scientist Cardiovascular Pharmacology

The Pharmacology Department of Smith Kline & French Laboratories is seeking a Postdoctoral Scientist to work with Dr. Robert R. Ruffolo, Jr. in an environment designed to foster creative innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community. Our postdoctoral appointments are of 1 year duration and with mutual agreement, renewable for a 2nd year.

The successful candidate will:

- participate in the study of drug, neurotransmitter and hormone receptors in the cardiovascular system.
- perform *in vitro* techniques in isolated smooth muscle preparations as well as *in vivo* studies to determine regional and systemic hemodynamics.
- correlate events at the receptor level to complex overall responses in the cardiovascular system, such as regional blood flows and myocardial performance.

Candidates are required to have:

- a Ph.D. in Pharmacology or Physiology with 0 to 2 years postdoctoral experience, and a working knowledge of the cardiovascular system.
- knowledge of autonomic pharmacology and a basic understanding of drug-receptor interactions.
- excellent oral and written communication skills.

Preference will be given to those who also have experience with *in vivo* cardiovascular models.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your curriculum vitae and names of three references to Mr. Walter B. Flagg, SmithKline Beckman Corporation, 1574 Spring Garden Street, Philadelphia, PA 19101.

We are an equal opportunity employer, M/F/H/V.

SK&F

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POSITIONS OPEN

NORTHWESTERN UNIVERSITY-CHICAGO ASSISTANT PROFESSOR ORAL PATHOLOGY

The Department of Pathology, Division of Oral Pathology, Northwestern University Schools of Dentistry and Medicine, currently is seeking a Board-certified or Board-eligible oral pathologist for a tenure-track position at the assistant professor level. Responsibilities include teaching of both undergraduate and postgraduate dental students and participation in the surgical oral pathology service. Candidates are expected to already have or develop a strong independent research program and actively participate in the department's M.S. and Ph.D. experimental pathology programs. Please send curriculum vitae and names and addresses of three references to: **Peter J. Polverini, D.D.S., D.M.Sc., Department of Pathology, Ward Building, Room 13-179, 303 East Chicago Avenue, Chicago, Illinois 60611.** Northwestern University is an Affirmative Action/Equal Opportunity Employer.

BENTHIC MARINE ECOLOGIST—The Division of Biology and Living Resources of the Rosenstiel School of Marine and Atmospheric Science, University of Miami, is reopening its search to fill a tenure-track appointment (assistant professor or higher). We are seeking a person whose research centers on quantitative ecology of macrobenthic populations and communities, with a strong interest in one or more of the local tropical environments, whether deep sea or shallow, and whose teaching abilities are in the area of principles of marine ecology, as exemplified by competition theory and predator/prey interactions.

Please address inquiries/applications no later than 1 November 1984, to:

Dr. Peter Lutz, Chairman
Division of Biology and Living Resources
4600 Rickenbacker Causeway
Miami, Florida 33149

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

BIOCHEMIST—Rank Open. A tenure-track faculty position in the Department of Medical Biochemistry, School of Medicine, Southern Illinois University at Carbondale, is available. This carries a joint appointment in the Department of Chemistry and Biochemistry, College of Science. Outstanding candidates whose research complements that of existing faculty are encouraged to apply. Some preference will be given to candidates studying protein structure and function using techniques of protein chemistry and/or modern molecular biology. Minimum qualifications are a Ph.D. degree and postdoctoral training. Qualified candidates should send curriculum vitae, an outline of planned research program, names of three references, and an indication of date available before 15 November 1984 to: **Robert W. Jackson, Associate Dean for Carbondale, School of Medicine, Attention: Dr. Wayne Bolen, Wheeler Hall, Southern Illinois University, Carbondale, Ill. 62901.**

Southern Illinois University at Carbondale is an Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGY NORTHWESTERN UNIVERSITY DEPARTMENT OF BIOCHEMISTRY, MOLECULAR BIOLOGY AND CELL BIOLOGY

Two new positions are available at the level of assistant/associate professor beginning fall 1985. We are interested in outstanding candidates with exceptional promise in research and teaching in the area of **CELL BIOLOGY**. Candidates should submit curriculum vitae, list of publications, reprints and preprints, a statement of research objectives, and request three letters of reference be sent to: **Dr. Lawrence B. Dumas, Faculty Search Committee, Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, Evanston, Illinois 60201.** Northwestern University is an Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGIST: Leave replacement; spring term 1985 (approximate dates: 14 January 1985 to 17 May 1985). Rank and salary commensurate with experience. Teach one-semester lecture/laboratory course in cell biology for sophomore majors. Three lectures per week and three lab sections. Ph.D. required; teaching experience with undergraduates desirable. Submit interest letter, curriculum vitae, transcript, and three letters of reference by 26 October 1984 to: **Cell Biologist Search, University of Puget Sound, P.O. Box 7297, Tacoma, Wash. 98407.** An Equal Opportunity/Affirmative Action Educator/Employer.

POSITIONS OPEN

ASSISTANT RESEARCH NUTRITIONIST, Division of Clinical Nutrition, School of Medicine, University of California, Davis. A position is available for an individual with a Ph.D. and at least 2 years of postdoctoral experience to perform independent research in the area of intestinal absorption and metabolism of dietary folates. Candidate must have proven scientific abilities, and background in nutrition, biochemistry and/or physiology. Send curriculum vitae and three letters of reference to: **Charles H. Halsted, M.D., Chief, Division of Clinical Nutrition, School of Medicine TB-156, University of California, Davis, California 95616.** This information must be received by 30 April 1985. *The University is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF COLORADO, BOULDER seeks applications for two positions in **BIOCHEMISTRY** to begin as early as September 1985. One will be a tenure-track assistant professor position. The other may be at any level, tenured or tenure-track; we are particularly interested in applicants at the senior level who have the interest and ability to chair an expanding program in biochemistry. Applications in all areas of biochemistry are encouraged. Applicants at the assistant professor level should send a résumé, copies of three representative publications, and statement of research plans, and have transcripts and three letters of reference sent to: **Professor Thomas R. Cech, Chair, Biochemistry Search Committee; Department of Chemistry; Campus Box 215; University of Colorado; Boulder, Colo. 80309.** Applicants for a senior position should write to: **Professor Cech.** The applications will be evaluated 1 November 1984, although later applications will be considered if the positions have not been filled. *The University of Colorado, Boulder, is an Affirmative Action/Equal Opportunity Institution.*

BIOCHEMISTRY FACULTY POSITION. The School of Chemistry, Georgia Institute of Technology, invites applications for a tenure-track position at the assistant-associate professor level. Candidates with research interests in genetic engineering or related areas of molecular biology are especially encouraged to apply but outstanding candidates with research interests in other areas of biochemistry will be considered. Send curriculum vitae, graduate and undergraduate transcripts, description of proposed research program, and three letters of recommendation to: **Professor Robert A. Pierotti, Director, School of Chemistry, Georgia Institute of Technology, Atlanta, Ga. 30332.** The deadline for receipt of applications and accompanying documents is 3 December 1984. *Georgia Institute of Technology is an Equal Opportunity/Affirmative Action Employer.*

CELL/DEVELOPMENTAL/MOLECULAR BIOLOGIST

The Department of Biology of the University of Rochester invites applications for a tenure-track position at the level of assistant professor. Appointment to begin on or about September 1985. Candidates should have shown excellence in research in areas of cell, developmental, or molecular biology (prokaryotic or eukaryotic). Applicants should send curriculum vitae, a statement of research interests, and have three letters of recommendation sent to:

Dr. Abraham Worcel
Chairman, Search Committee
Department of Biology
University of Rochester
Rochester, N.Y. 14627

MOLECULAR EVOLUTION

The Department of Biology of the University of Rochester solicits applications for two faculty positions (levels open), beginning September 1985. Research areas of special interest are the comparative anatomy of macromolecules, the evolution of structure and function of genes and proteins, and the application of molecular data to problems of evolutionary biology. Successful candidates will have had extensive training and experience in both molecular biology and evolutionary biology. Applicants should provide the search committee with curriculum vitae, a statement of research interests, and three letters of recommendation, to be sent to:

R. K. Selander, Chairman
Molecular Evolution Search Committee
Department of Biology
University of Rochester
Rochester, New York 14627

Closing date for applications is 31 December 1984. *The University of Rochester is an Affirmative Action/Equal Opportunity Education Institution, M/F.*

POSITIONS OPEN

CELL AND MOLECULAR BIOLOGY

The Department of Zoology, University of Maryland, invites applications for a tenure-track appointment beginning fall 1985. The applicant should have postdoctoral experience and show potential for developing a strong research program involving the use of molecular techniques to study the mechanism or regulation of gene expression (for example, in cell growth and differentiation or cellular responses to external signals). Applications must be received by 30 November 1984. Send curriculum vitae, reprints, a statement of research interests, and at least three letters of recommendation to: **Dr. Ibrahim Z. Ades, Chairman, Search Committee, Department of Zoology, University of Maryland, College Park, Md. 20742.** *Affirmative Action/Equal Opportunity Employer.*

CHAIR OF ANESTHESIOLOGY

The College of Medicine of the University of California at Irvine seeks a person of exceptional ability to occupy the chair of the Department of Anesthesiology. Candidates should hold the M.D. degree, be Board-certified in anesthesiology, have an excellent record of research accomplishments, and have demonstrated academic leadership ability. The chair is expected to build a department with strong research programs without sacrificing quality in the clinical service and teaching programs. We hope to fill the position by April 1985. Persons who wish to be considered for the position should send curriculum vitae and the names of three referees to:

Professor Stephen H. White, Chairman
Department of Physiology and Biophysics
University of California
Irvine, California 92727

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

CHAIRPERSON, DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

Texas College of Osteopathic Medicine invites applications and nominations for professor and chairperson of the Department of Microbiology/Immunology. Candidates should be recognized leaders in the field with established research and teaching credentials and should have ability to administer medical and graduate programs in a growing medical school. Applications and nominations should be sent by 1 December 1984 to:

Dr. Carl E. Jones, Chairman
Search Committee for Microbiology/Immunology
Department of Physiology
Texas College of Osteopathic Medicine
Fort Worth, Texas 76107

Texas College of Osteopathic Medicine is a state medical school under the Board of Regents of North Texas State University and is an Equal Opportunity/Affirmative Action Employer.

CHAIRPERSON-DEPARTMENT OF BIOCHEMISTRY University of Utah School of Medicine

The University of Utah is seeking a new chairperson of biochemistry who will develop a first-rate group that uses basic biochemical and physical methods to investigate biological problems at a molecular level. Our hope is that the Biochemistry Department will develop graduate and research programs that are broadly interactive with medical and other groups in the university. To help assure the success of this venture, the university is committing to the chairperson new positions, new space, and substantial start-up funds. Interested individuals should send curriculum vitae to: **Zell A. McGee, M.D., Center for Infectious Diseases, Diagnostic Microbiology and Immunology, University of Utah School of Medicine, Salt Lake City, Utah 84132,** before 1 November 1984. *The University of Utah is an Equal Opportunity/Affirmative Action Employer.*

Applications submitted after the deadline may be considered if no qualified candidates have applied by that date.

DEAN OF SCIENCE AND MATHEMATICS

California Polytechnic State University
San Luis Obispo, California

Position available 1 July 1985. Closing date: 15 January 1985. Information and application instructions may be obtained from: **Dr. Tomlinson Fort, Jr., Provost, California Polytechnic State University, San Luis Obispo, Calif. 93407.**

*Affirmative Action/Equal Opportunity/
Title IX Employer*

LIPID METABOLISM & ARTERIOSCLEROSIS RESEARCH

The Lipid Metabolism-Atherogenesis Branch, Division of Heart and Vascular Diseases, National Heart, Lung, and Blood Institute, is inviting applications for a staff position in the extramural program to participate with clinician and nonclinician scientists in the implementation of national objectives in research related to lipid metabolism and arteriosclerosis.

The Lipid Metabolism-Atherogenesis Branch is responsible for planning and administration of research into the structure, metabolism and function of lipids and lipoproteins as they related to atherogenesis, and into basic and applied studies of the causes, development, and prevention of atherosclerosis in large- and medium-size arteries in the body. This involves coordination of a national research program designed to increase

knowledge related to the diagnosis and management of the dyslipoproteinemiae, and promotion of research that will enhance understanding of the etiology, pathogenesis, complication, and prevention or cure of atherosclerosis. Intrinsic to these activities are the development and promotion of basic and applied research programs in nutrition as it relates to the cause, prevention and treatment of dyslipidemia and arteriosclerosis.

Applicants must have the M.D. degree or equivalent and experience in research. A background in lipid metabolism and arteriosclerosis research is highly desirable.

Appointment will be made in the federal civil service or the U.S. Public Health Service Commissioned Corps. Salary and benefits will be commensurate with qualifications and method of appointment. A

qualifying candidate in the civil service would receive a minimum of \$44,242 and may be eligible for a comparability allowance up to \$10,000 per year.

Those interested in being considered for this position should submit their Personal Qualifications Statement (SF-171) which is available in Federal Personnel Offices and Federal Job Information Centers, along with a Curriculum Vitae and Bibliography by October 31, 1984 to Ms. Donna Brooks, NHLBI Personnel Office, National Institutes of Health, Public Health Service, 9000 Rockville Pike, Building 31, Room 5A-34, Bethesda, MD 20205, or call (301) 496-6477.

NIH is an Equal Opportunity Employer

Director, Laboratory Animal Science

The Preclinical Research and Development Area of Smith Kline & French Laboratories is seeking an experienced Veterinarian to assume the scientific and managerial leadership of our Laboratory Animal Science Department.

The successful candidate will be responsible for setting the scientific direction of the department and will supervise a skilled group of veterinarians and technical specialists in support of research programs and development projects at multiple sites located in Philadelphia and nearby Upper Merion Township.

In addition to providing expertise in Laboratory Animal Medicine to R&D's scientific community, the incumbent will be responsible for assuring compliance with regulatory and animal welfare standards.

Candidates are required to have a doctorate degree in veterinary medicine, board certification and a minimum of 10 years experience in industry or academia.

Additionally, a sound publication record in leading journals and a national reputation for excellence in veterinary medicine are prerequisites, as are excellent communication, leadership and interpersonal skills.

Smith Kline & French Laboratories offers an excellent benefits and compensation program including an attractive relocation package. For confidential consideration, send your c.v. to Ms. Angela Francesco, Human Resources Manager, Smith Kline & French Laboratories, 1550 Spring Garden Street, Philadelphia, Pa. 19101.

We are an equal opportunity employer. M/F/H/V.

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A SmithKline Beckman Company

POSITIONS OPEN

CHEMISTRY FACULTY POSITIONS AT INDIANA UNIVERSITY

The Department of Chemistry at Indiana University-Bloomington has several tenure-track openings at the junior and senior levels. We are interested in candidates with training in analytical, biological, and physical-organic chemistry at the junior level; senior level candidates in physical-organic and biological chemistry will also be considered. These positions will require the ability to organize and present courses at both the graduate and undergraduate levels. Moreover, potential candidates are expected to have a solid record of accomplishment in research. Outstanding, vigorous, independent programs of investigation must be under way for senior candidates and in process of development for junior ones. To apply, submit curriculum vitae, publication list, names of references, and a short résumé of ideas for the development of research programs. Candidates at the junior level should arrange to have three letters of recommendation forwarded as well. Deadline for applications is 30 November 1985. Please apply to:

Professor V. J. Shiner, Jr., Chairman
Department of Chemistry
Indiana University
Bloomington, Indiana 47405

Indiana University is an Equal Opportunity/Affirmative Action Employer.

COLLOIDAL CHEMISTRY, strong background needed. Postdoctoral position now available in Center for Ceramics Research at Rutgers University. Salary of \$25,000, 2-year contract. Send résumé and names and addresses of three references to: **Professor Stephen C. Danforth, Center for Ceramics Research, P.O. Box 909, Rutgers University, Piscataway, N.J. 08854.**

DUKE UNIVERSITY DEVELOPMENTAL BIOLOGY

The Department of Zoology seeks an outstanding scientist to fill a position in **DEVELOPMENTAL BIOLOGY** at a tenured rank. Consideration will be given to candidates who have a vigorous, innovative research program and a distinguished record of accomplishment. The appointee will teach a one-semester course in developmental biology, and a graduate-level course. Candidates in any area of developmental biology are encouraged to apply. Send curriculum vitae, one copy of selected publications, and the names of three referees by 1 December 1984 to: **Dr. David R. McClay, Chairman, Search Committee, Department of Zoology, Duke University, Durham, N.C. 27706.**

PLANT CELL BIOLOGY

The Department of Botany announces an opening in **PLANT CELL BIOLOGY** at a tenured level. Consideration will be given to distinguished candidates with proven excellence. The successful candidate will be expected to build upon a nationally recognized research program, contribute to undergraduate and graduate teaching, and participate in the interdepartmental graduate training program in cellular and molecular biology. Applicants should send curriculum vitae, copies of publications, and the names of three references by 1 December 1984 to: **Dr. James N. Siedow, Chairman Search Committee, Department of Botany, Duke University, Durham, N.C. 27706.**

Duke University is an Equal Opportunity/Affirmative Action Employer.

The University of Michigan invites applications for the **DIRECTORSHIP** of its Unit for Laboratory Animal Medicine. The position will become vacant on 1 July 1985, when the present director assumes other university duties. The director is expected to lead a multifaceted academic program of service, research, and education related to the care and use of laboratory animals university wide. Applicants should be Michigan licensed veterinarians or veterinarians capable of obtaining a Michigan license within 2 years. They should be diplomates of the American College of Laboratory Animal Medicine or another relevant veterinary medical specialty and be qualified for an accompanying appointment as associate professor or professor of laboratory animal medicine. Applications for the position of professor and director should be sent as soon as possible to: **Karen E. Erhardt, Staff Assistant, Unit for Laboratory Animal Medicine Director Search Committee, Office of Biomedical Research, University of Michigan Medical School, M7317 Medical Science Building I, Ann Arbor, Michigan 48109.**

The University of Michigan is an Affirmative Action Employer.

POSITIONS OPEN

COMPARATIVE INVERTEBRATE BIOLOGIST. Tenure-track assistant professor; higher rank will be considered in exceptional circumstances. Applicant should provide evidence that he/she can develop a strong, independent research program and has a broad, general knowledge of marine invertebrates. Send curriculum vitae, a one-page outline of future research plans and have four letters of recommendation sent by 1 December 1984 to: **Invertebrate Biology Search Committee, Department of Biology, Coker Hall 010A, University of North Carolina, Chapel Hill, N.C. 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

DEAN COLLEGE OF SCIENCES UNIVERSITY OF NEW ORLEANS (UNO) Open 1 June 1985

UNO is a young, developing state-supported institution located in New Orleans on Lake Pontchartrain. The university enrollment consists of approximately 14,000 undergraduate and 2,500 graduate students. The College of Sciences offers the baccalaureate degree in computer sciences, baccalaureate and masters degrees in biology, chemistry, earth sciences, mathematics, physics, and psychology and the Ph.D. degree in chemistry and psychology.

Candidates should possess outstanding credentials in research and teaching in one or more of the above mentioned degrees. Administrative experience is desirable but not required. Salary is negotiable. Completed applications must be submitted by 1 December 1984 and should include: (i) curriculum vitae including degrees and institutions, professional experience, list of publications, and accomplishments in obtaining external funding, (ii) a statement of professional interest and objectives, and (iii) a minimum of three letters of recommendation.

For further information send inquiries to: **Dr. Jack W. Timberlake, Chairman Search Committee, Department of Chemistry, University of New Orleans, New Orleans, Louisiana 70148.**

UNO is a member of the Louisiana State University System and is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS AVAILABLE

The Department of Cell Biology and Anatomy, Oregon Health Sciences University, School of Medicine, invites applications for assistant professor, tenure-track positions. Applicants should have at least 2 years of postdoctoral training and excellent research potential in modern molecular, genetic, and/or immunological approaches to study of cell regulation and function. The successful candidate will be expected to participate in the teaching of cell/molecular biology, histology, gross anatomy, or neuroscience. Interested candidates should forward their curriculum vitae, reprints, statements of research objectives, and the names of three references to: **Search Committee, Department of Cell Biology and Anatomy, Oregon Health Sciences University, School of Medicine, Portland, Oregon 97201.**

The Oregon Health Sciences University is an Affirmative Action/Equal Opportunity Employer.

TENURE-TRACK FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry at the University of Wisconsin-Madison invites applications for a position as assistant, associate, or full professor in the areas of fermentation biochemistry, microbial physiology, cell physiology, and/or chemical engineering. Candidates must have demonstrated excellence and independence in biochemical research, and have a strong background of training in biochemistry. The university is developing a biotechnology center, and this position can be expected to involve strong interactions with that center as well as with departments such as bacteriology, genetics and chemical engineering. The facilities of the Biochemistry Department include a pilot plant which we wish to develop into a state-of-the-art facility for growing organisms. The successful candidate will be expected to take a leading role in the development and administration of this facility. Applications, including complete curriculum vitae and plans for future research, should be sent to: **Dr. H. F. DeLuca, Department of Biochemistry, University of Wisconsin-Madison, Madison, Wis. 53706,** and candidates should have letters sent from three people familiar with them and their work. Applications should be received by 31 December 1984 in order to guarantee consideration. *The university is an Affirmative Action/Equal Opportunity Employer, and applications are encouraged from women and minorities.*

POSITIONS OPEN

DIRECTOR Chesapeake Bay Institute The Johns Hopkins University

The Johns Hopkins University seeks an established marine scientist to become director of Chesapeake Bay Institute (CBI). The institute has a long history of outstanding research in estuarine and marine processes. Recent additions to the staff have provided a nucleus of talented young investigators specializing in biochemistry and physiology, biological oceanography, cellular and molecular biology, physical oceanography, and aquatic toxicology. CBI is located on a 7-acre waterfront site near Annapolis, Maryland, and is housed in a newly remodeled facility with excellent laboratories and ample space for continued expansion. The Institute operates a UNOLS vessel (R/V *Warfield*) and several small boats. Candidates for director should possess a strong record of research accomplishments in one of the areas above or a related area, and bring to CBI an active research program and the leadership qualities required to promote the continuing growth of the Institute. Curriculum vitae, names and addresses of four references, and any other pertinent information or inquiries should be addressed to: **Dr. Dennis A. Powers, Acting Director, Chesapeake Bay Institute, 4800 Atwell Road, Shady Side, Maryland 20764.** Applications should be received by 1 December 1984. *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

ENTOMOLOGIST: Orange County Mosquito Control is seeking applications for position of staff entomologist. Interested persons should send résumé or contact: **Philip Welch, Mosquito Control Director, Orange County Courthouse, Orange, Texas 77630; telephone: 409-883-5717.**

The Department of Biological Sciences at Carnegie-Mellon University anticipates having two tenure-track **FACULTY OPENINGS** during the next 2 years, one in the area of prokaryotic molecular genetics and the other in *in vivo* NMR. These appointments will be made at the assistant, associate, or full professor level depending on the experience and accomplishments of the candidates. Applicants should submit curriculum vitae and a short statement of their future research directions. Applicants for a non-tenure position should also ask three individuals to write letters of recommendation. Forward these materials to: **Dr. Chien Ho, Department of Biological Sciences, Carnegie-Mellon University, 4400 Fifth Avenue, Pittsburgh, Pa. 15213.** *Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.*

ROSWELL PARK MEMORIAL INSTITUTE Department of Human Genetics

FACULTY POSITIONS are open at the assistant or associate professor levels in the fields of molecular genetics of human cancer and molecular genetics of human inherited disorders. Applicants should have a Ph.D. or M.D. degree, be actively engaged in human molecular genetics research, have appropriate postdoctoral experience, and have current grant support or show evidence of productive work sufficient to compete for federal grant support. Candidates will be expected to develop a vigorous and independent research program, participate in a graduate training program, and interact with faculty members. Roswell Park Memorial Institute is a comprehensive cancer hospital and research institute. Graduate education is through the Roswell Park Graduate Division of the State University of New York. Send curriculum vitae, a short description of research plans, and names of three references to: **Dr. Thomas B. Shows, Ph.D., Department of Human Genetics, Roswell Park Memorial Institute, Buffalo, New York 14623.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN BIOCHEMISTRY AT CASE WESTERN RESERVE UNIVERSITY. The Department of Biochemistry invites applications for a tenure-track position from outstanding candidates in modern biochemistry or molecular biology. The position is at the assistant professor level but exceptionally well qualified applicants will be considered at higher academic levels. Research areas of interest are open but special consideration will be given to applicants in protein chemistry, virology, immunochimistry, neurobiochemistry, cell biology, or membrane studies. Send letter of application, curriculum vitae, names of references, and description of research interest to: **Dr. Kenneth E. Neet, Search Committee, Department of Biochemistry, Case Western Reserve University, 2119 Abington Road, Cleveland, Ohio 44106.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR AND CELLULAR BIOLOGY

The Department of Biology and Biotechnology at Worcester Polytechnic Institute (WPI) seeks to fill a tenure-track faculty position at a level commensurate with the qualifications of the candidate. The successful candidate will be expected to establish a productive research program and to participate in research-oriented undergraduate and graduate teaching. Preference will be given to candidates with research interests in the areas of (i) gene structure and function and (ii) regulation of development. Applicants should forward curriculum vitae, a concise statement of research plans, and three letters of recommendation to: Search Committee, c/o Dr. J. C. Bagshaw, Department Head, Department of Biology and Biotechnology, Worcester Polytechnic Institute, Worcester, Mass. 01609. Applications will be accepted until 1 November 1984. WPI is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN CELL BIOLOGY

Applications are invited for several tenure-track positions in the newly reorganized Department of Cell Biology and Anatomy at the Northwestern University Medical and Dental Schools. These positions are for assistant professors and, in exceptional cases, for associate professors. Applicants must have a Ph.D., M.D., or D.D.S. degree with research experience in cell-molecular biology, cellular neurobiology, structural biology, developmental biology, or related areas. Applicants should be able to demonstrate excellence or the potential for excellence in their respective fields. Successful applicants will be expected to carry on vigorous research programs and to participate in the teaching of graduate, medical, and dental students. Send complete curriculum vitae, brief description of previous and future research and teaching interests, and recommendations from at least three referees by 15 November 1984 to: Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Illinois 60611. Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

FACULTY POSITIONS IN PHARMACOLOGY

The Department of Pharmacology and the Cancer Center at the University of Rochester invite applications for two faculty positions, one a tenure-track assistant professor and the other an associate or full professor. The successful applicants may hold a joint primary appointment in the Department of Pharmacology and in the Cancer Center or may be appointed in the Department of Pharmacology alone. Applicants should have a Ph.D. in pharmacology or a related field, an M.D., or both, postdoctoral research training, the potential to attract research support and to establish or maintain an independent research program, and an interest in professional and graduate training. Individuals with research interests in the areas of cellular regulatory mechanisms, receptor-mediated mechanisms, neuropharmacology, endocrine pharmacology, cancer chemotherapy, chemical carcinogenesis, or tumor biology and who apply the techniques of modern biochemistry and cell and molecular biology to pharmacological investigations are sought in particular. The deadline for applications is 1 December 1984. Applicants should forward curriculum vitae, a list of publications, three letters of reference, and a summary of current and future research interests to: Search Committee, Department of Pharmacology, Box Pharmacology, School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, New York 14642. Equal Opportunity Employer, M/F.

FACULTY POSITION is currently available at Brown University to direct a developing program concerned with a novel in vitro system for assessing individual sensitivity to anticancer drugs. There is technologist support as well as supplies and equipment budget. The appointment has the rank of **Assistant Professor (Research)**, a nontenure-track position. Applicants should have a Ph.D. or M.D. with a solid background in cell biology, and experience related to tissue culture techniques. Candidates should forward a résumé of professional experience and the names and addresses of three references to: Dr. M. B. Rotman, Division of Biology and Medicine, Brown University, Providence, Rhode Island 02912. Deadline for applications is 30 November 1984. Brown University is an Equal Opportunity/Affirmative Action Employer.

12 OCTOBER 1984

IMMUNEX

ANIMAL HEALTH LABORATORY POSITIONS

Immunex Corporation is expanding its scientific staff in order to keep pace with its achievements in commercial development of lymphokines and immune response modifiers. Immunex currently has vacancies in the following areas:

Staff Scientist

(Animal Health Laboratory):

Ph.D. or D.V.M. with postdoctoral training required. The successful candidate should have experience in cellular immunology, T-cell hybridomas, or lymphokine/monokine preparation and analysis. Veterinary research helpful, but not essential.

Assistant Staff Scientist (Animal Health Laboratory):

Recently completed Ph.D. The successful candidate will have been trained in the area of cellular immunology. Veterinary research helpful, but not essential.

Immunex Corporation is a Seattle-based biotechnology company specializing in immunoregulation by lymphokines. The company offers competitive salaries, an equity participation program, and a generous fringe benefits package. To apply, please send resume and the name of 3 references to Dr. P.E. Baker.

Immunex Corporation
51 University Street
Seattle, WA 98101

CELL BIOLOGY RESEARCH

Continuing its commitment to a strong research organization, **The Upjohn Company** (a leader in worldwide research, production, and marketing of pharmaceuticals, chemicals, and agricultural products) is significantly expanding its existing biotechnology activities and assembling a strong core biotechnology research and development support group. Comprised of the Cell Biology, Molecular Biology, and Biopolymer Chemistry research units, the Biotechnology group develops techniques and undertakes state-of-the-art basic and applied studies.

The Cell Biology unit is establishing research efforts in several areas including: molecular immunology, hybridoma research, receptor isolation, purification and characterization, membranes, cell-cell communication, and intracellular protein sorting. The Cell Biology unit is responsible for developing basic techniques, and making these techniques available to groups in Pharmaceutical, Agricultural and Fermentation research. By maintaining and applying an in-depth understanding of cellular and molecular biology, this group supports lead-finding technique development, and studies of molecular aspects of disease processes.

Job opportunities exist for both Ph.D. and M.S. level positions. The Ph.D. Scientist positions require postdoctoral experience and a significant publication record. The M.S. level positions require research experience and a demonstrated ability to work independently. For each specific area listed below, the parentheses indicate at which education level Upjohn is recruiting.

cell receptors (Ph.D., M.S.)
membrane transport (Ph.D.)
hybridomas (Ph.D., M.S.)

molecular immunology (Ph.D., M.S.)
cell-cell communication (Ph.D.)
cellular differentiation (Ph.D.)

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance. In addition, these positions present an extraordinary opportunity to be involved in a quality state-of-the-art research program.

For confidential consideration and an application please call, toll free, Upjohn's Corporate Employment Office in Kalamazoo, Michigan at 1-800-253-8600 and ask for extension 3-6767. In Michigan call collect: 616/323-6767. When calling, please refer to ad #4000-G and state your degree level (Ph.D. or M.S.)

Upjohn

A century of caring

An Equal Opportunity Employer M/F/H/V

POSITIONS OPEN

FACULTY POSITION IN PLANT MOLECULAR BIOLOGY

The University of California at Berkeley announces a faculty appointment in the Division of Molecular Plant Biology. Candidates should have a Ph.D. and postdoctoral experience in an appropriate field, demonstrated excellence, originality, and productivity in the general area of the molecular biology of plants in addition to a strong commitment to undergraduate and graduate teaching. Appointment may be made at either the tenured or nontenured level. Position available 1 July 1985.

Applicants should submit curriculum vitae, a bibliography, a two-page outline of research objectives and teaching interests, and three letters of references by 15 December 1984 to: **B. B. Buchanan, Division of Molecular Plant Biology, University of California, Berkeley, Calif. 94721. The University of California is an Equal Opportunity/Affirmative Action Employer.**

PHARMACOLOGY/TOXICOLOGY

Applications are invited for a tenure-track faculty position at the level of assistant professor. Candidates must have a Ph.D. degree with at least 2 years of postdoctoral research experience. The successful candidate will be expected to establish an independent research program in pharmacology or toxicology and participate in teaching at the undergraduate and graduate level. Please send curriculum vitae and the names of three references by 1 November 1984 to: **Dr. Mustafa F. Lokhandwala, Chairman, Department of Pharmacology, College of Pharmacy, University of Houston-University Park, Houston, Texas 77004.**

The University of Houston is an Equal Opportunity Employer.

FACULTY POSITION IN VIRAL GENETICS

Responsibilities of the position include assisting other faculty in the instruction of veterinary students in virology and the development of graduate training in a Ph.D. program in veterinary medical sciences. The appointee will be expected to develop a significant research effort in viral genetics. In addition, other research with basic or applied relevance to veterinary medicine would be an advantage.

Applicants should possess a veterinary degree and/or a Ph.D. or equivalent with proven research capability.

Faculty rank and salary will be competitive and commensurate with qualifications and experience. This is a tenure-track position.

In applying, please submit curriculum vitae with a statement of intent detailing professional interest and experience, and the names and addresses of three references to:

**Dr. Donald O. Cordes, Professor and Chairman
Division of Pathobiology and Public Practice
Virginia-Maryland Regional College
of Veterinary Medicine
Virginia Tech
Blacksburg, Virginia 24061**

Deadline for application is 30 October 1984 or until position is filled.

An Equal Opportunity/Affirmative Action Institution

FISHERY BIOLOGIST (RESEARCH), TASK LEADER NATIONAL MARINE FISHERIES SERVICE, NOAA, DOC (SEATTLE)

Multidisciplinary research unit studying effects of environmental changes (for example, pollution) on living marine resources and their habitats needs task leader (Ph.D.) for Biological Effects Task. Strong supervisory/management skills, in-depth knowledge of the biology, physiology, and toxicology of marine organisms, and general knowledge of microbiology, clinical chemistry, pathology, and cell biology are required. Salary range is \$42,930 to \$55,800. Send applications (SF-171, Personal Qualifications Statement, available at most federal agencies) to: **Mary Buster, NOAA, WASC, Bin C15700, 7600 Sand Point Way NE, Seattle, Wash. 98115 by 29 December 1984. The U.S. Department of Commerce is an Equal Employment Opportunity Employer.**

GENETIC EPIDEMIOLOGIST. Applications are now being accepted for a postdoctoral research position available 1 March 1985. Appointments are annual, with possible reappointment for up to 5 years. A predoctoral assistantship is also available. For further information, contact: **Newton E. Morton, Population Genetics Laboratory, University of Hawaii, 1980 East-West Road, Honolulu, Hawaii 96822.**

POSITIONS OPEN

GENETICIST/MOLECULAR GENETICS

The Genetics Department at Iowa State University welcomes applications for two tenure-track 12-month faculty positions which require both teaching and research. Rank and salary (\$35,000 minimum) will be commensurate with qualifications and experience. Preference will be given to candidates with both a strong background in eukaryotic genetics and competence in recombinant DNA techniques. Send curriculum vitae, names of three referees, and a summary of research interests by 1 December 1984 to: **Alan Atherly, Department of Genetics, Iowa State University, Ames, Iowa 50011.**

An Affirmative Action/Equal Opportunity Employer.

INFECTIOUS DISEASES—University of Minnesota. A full-time faculty position at the assistant professor level is available in the infectious diseases section. Candidates should be Board-certified in internal medicine and have completed a fellowship in infectious diseases. Research experience in the area of molecular virology, viral pathogenesis, or viral immunology is desired. Forward curriculum vitae and have three letters of recommendation sent to: **M. Colin Jordan, M.D., Box 250 Mayo Memorial Building, University of Minnesota Hospitals, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

The Department of Neurology at the University of Michigan is seeking applications for tenure-track, university-based faculty positions at the **INSTRUCTOR TO ASSISTANT PROFESSOR** level. Applicants should be Board-qualified or -eligible in neurology. Curriculum vitae and three letters of recommendation should be sent to: **Kenneth L. Casey, M.D., Chairman, Neurology Recruitment Committee, Neurology Service, VA Medical Center, 2215 Fuller Road, Ann Arbor, Michigan 48105. The University of Michigan is an Equal Opportunity/Affirmative Action Employer.**

NEW ZEALAND UNIVERSITY OF CANTERBURY LECTURESHIPS IN BOTANY (TWO APPOINTMENTS)

Applications are invited for two lectureships in the Department of Botany.

The successful applicants will each have a proven record in one or the other of the following fields: (i) ecology or (ii) phycoecology/algal physiology. One of the appointees must be capable of lecturing in biometrics. The appointees will be required to contribute to undergraduate teaching and to pursue a vigorous research programme including the encouragement and supervision of postgraduate students.

The salary for lecturers is on a scale from NZ\$21,660 to NZ\$25,684 per annum.

Applications close on 14 December 1984.

Further particulars and conditions of appointment may be obtained from: **W. Hansen, Registrar, University of Canterbury, Private Bag, Christchurch, New Zealand.**

MEMBRANE NUTRITIONIST. A new faculty position at the assistant or associate professor level, depending on qualifications, open 1 January 1985. Position supported by university's Food for the 21st Century program. Experience in membrane and cell culture research required, and participation in the nutrition program expected. Appointee must establish and direct, with the support of a research associate, a cell culture laboratory and a research program relating membranes, cell culture, and nutrition. Teaching at the graduate level is expected. Send curriculum vitae and names of three references to: **Dr. B. L. O'Dell, Department of Biochemistry, University of Missouri, Columbia, Mo. 65211. An Affirmative Action/Equal Opportunity Employer.**

PATHOLOGIST. The University of Michigan Medical School, Department of Pathology, is seeking a pathologist (Board-certified or -eligible) in anatomic and clinical pathology for an academic position that will involve responsibility for service activities in the Anatomic and Clinical Pathology Laboratories. An interest and training in independent research and teaching related to medical students, fellows, and house officer staff is preferred. Candidates should contact: **Peter A. Ward, M.D., Professor and Chairman, Department of Pathology, University of Michigan Medical School, 1315 Catherine Road, Ann Arbor, Mich. 48109; telephone: 313-763-6384.**

POSITIONS OPEN

MOLECULAR BIOLOGIST/PROTEIN CHEMIST

A tenure-track position at the **Assistant or Associate Professor** level is open in the Division of Hematology-Oncology, Department of Pediatrics, University of Southern California (USC) at Childrens Hospital of Los Angeles, with a joint appointment in microbiology or biochemistry and membership in the Norris-USC Cancer Center. Candidate should have background in molecular biology or protein biochemistry and preferably have developed a cancer research program in growth factors, membrane receptors, cell-cell interactions, or gene expression. Send curriculum vitae, representative publications, a statement of research interests, and the names of three references to: **John Holcenberg, M.D., Section Head for Basic Research, Division of Hematology-Oncology, Childrens Hospital of Los Angeles, Box 54700, Los Angeles, Calif. 90054-0700.**

An Equal Opportunity/Affirmative Action Employer

MOLECULAR GENETICIST

Position available immediately for postdoctoral molecular geneticist with experience in recombinant DNA technology. Appointee will develop an active independent research program and supervise characterizations of cultures with chromosome abnormalities and enzyme defects in selected cultures in the NIGMS Human Genetic Mutant Cell Repository. Several years of experience in biochemistry, molecular biology, and genetics desirable. Appointment will be at the research associate or assistant member level. Competitive salary and benefits. Application should include curriculum vitae, list of publications, and three letters of reference to: **Dr. Arthur E. Greene, Institute for Medical Research, Copewood and Davis Streets, Camden, New Jersey 08103. An Equal Opportunity/Affirmative Action Employer.**

PHARMACOLOGY

The Department of Pharmacology, Division of Functional Biology, of the West Virginia School of Osteopathic Medicine (WVSOM), seeks two assistant or associate professors of pharmacology. Applicants must have a good background in general physiology and pharmacology, with experience in one or more of the following areas: cardiovascular, pharmacology, neuropharmacology, and chemotherapy and antibiotics. Significant teaching experience and a demonstrated ability to conduct independent research are also required.

Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: **Michael Cope, Ph.D., Associate Dean for Academic Affairs, WVSOM, 400 North Lee Street, Lewisburg, W.Va. 24901 by 16 November 1984; the position is available immediately.**

PHARMACOLOGIST OR TOXICOLOGIST. The Department of Pharmacology and Therapeutics, Schools of Medicine and Dentistry, invites applications for two full-time, tenure-track faculty positions as assistant professor. Preference is for a strong background in **molecular-cellular pharmacology** for one position, and **toxicology** for the other. Positions offer opportunities for basic research and teaching. Candidates must have a Ph.D. degree in pharmacology or toxicology or a related discipline, or an M.D. degree with appropriate training in basic pharmacology or toxicology. Postdoctoral experience and evidence of ability to conduct independent research, for example publications and grants obtained, are required. Send curriculum vitae and also request that three letters of recommendation be sent to: **Dr. Edward A. Carr, Jr., 127 Farber Hall, State University of New York at Buffalo, Buffalo, New York 14214. An Equal Opportunity/Affirmative Action Employer.**

PHYSIOLOGIST. The Department of Biology invites applications for a tenure-track appointment beginning August 1985. The successful candidate will teach an upper-level course in physiology (animal and plant) for science majors and a human physiology course for nursing majors in alternate semesters, participate in introductory biology laboratories, and guide students in research projects. Specialization in mammalian physiology is desirable although other areas of physiology will be considered. Establishment of a research program is expected. A completed Ph.D. is required by June 1985. Send curriculum vitae, official transcripts, and a statement of teaching and research plans by 15 December 1984 to: **Dr. Anne A. Susalla, Physiology Search Committee, Department of Biology, Saint Mary's College, Notre Dame, Ind. 46556. Saint Mary's College is an Equal Opportunity Employer.**

MANAGER SCIENCE POLICY STUDIES

The American Association for the Advancement of Science (AAAS) has an opening for a mid-level manager to participate in the planning, development, and execution of major activities in the field of science, engineering, and public policy. Specific areas of responsibility include: preparation of budget analyses and coordination of major annual science policy meeting; organization and conduct of workshops and seminars; and development of initiatives and research projects on science, engineering, and public policy. Incumbent will serve as staff liaison to one or more AAAS committees; will represent AAAS in various forums to key officials, agencies, and professional societies concerned with science, technology, and public policy; and will be principal investigator on selected grants.

This position requires an advanced degree in a technical area or public policy; three or more years of experience in practice, research, or teaching related to science or engineering and public policy; good understanding of the functioning of the federal government in science and technology and current related issues; and excellent organizational and communications (written and oral) skills. Responsibilities are carried out under the general supervision of the head of AAAS Office of Public Sector Programs.

Please submit letter of application including salary requirements and résumé to: **C. B. Pruitt, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.**

An Equal Opportunity Employer

LABORATORY SALES

TECHNICAL REPRESENTATIVES

Positions Open Nationally

Due to recent expansion, the Pharmacia Biotechnology Group, a leader in the field of separations technology is seeking technical representatives to market its product in VARIOUS TERRITORIES NATIONWIDE. Responsibilities include direct sales contact, conducting seminars and demonstrations. Overnight travel up to 45%.

A BS degree in the biological sciences is required. Familiarity and background with techniques used in biochemistry laboratory research and previous sales experience are preferable. This position offers the opportunity for advancement.

We offer an excellent compensation package including salary, commissions, company car and other fringe benefits.

Please send your resume, complete with salary history to: PERSONNEL DEPARTMENT, PHARMACIA INC., 800 CENTENNIAL AVENUE, PISCATAWAY, NEW JERSEY 08854. We are an equal opportunity employer m/f



Pharmacia

DEPUTY DIVISION LEADER LIFE SCIENCES DIVISION

This is a senior management position requiring a balanced combination of scientific, management and interpersonal skills. The Deputy Division Leader shares with the Division Leader scientific leadership, as well as technical and administrative management of a multidisciplinary division with a strong research focus in toxicology, experimental pathology, genetics, environmental science and neurobiology. It encompasses program development and management, interaction and communication with technical personnel and senior laboratory management, recruitment of scientific personnel, and financial and facilities management. Extensive interaction is required with sponsoring agencies; i.e. DOE, DOD, NIH, and the private sector.

The Life Sciences Division also develops and maintains a National Flow Cytometry Resource, funded jointly by NIH and DOE; and resources in chromosome-specific DNA libraries; an environmental engineered field test site and a National Environmental Research Park, all funded by the DOE. The Life Sciences staff interact closely with Laboratory staff members working in theoretical biology, physics, nuclear chemistry, chemistry, and health sciences. Strong collaborations occur with academia, private industry, and other government agencies. The Division, with an annual budget of \$18M, employs approximately 160 people (70 technical staff members).

Qualifications expected for this position include: a distinguished scientific record in one or more of the Division's major research areas; demonstrated senior management experience in both line and program management of a multidisciplinary technical organization including experience in technical administration of major research and development contracts; a successful record of leadership ability; demonstrated effective oral, written, and interpersonal communication skills; Ph.D., M.D., or D.V.M with relevant training in biology, biophysics, or medicine.

The Laboratory, a national resource for multifaceted scientific research, is operated by the University of California for the U.S. Department of Energy. Our beautiful location in the mountains of northern New Mexico offers a relaxed community lifestyle with an excellent school system and exceptional outdoor recreational activities.

To apply, please submit your resume, in confidence, with complete salary history and publication record by November 12, 1984, to:

Sandra Harding
Personnel Administration Division
DIV. 85-A
Los Alamos National Laboratory
Los Alamos, New Mexico 87545



POSITIONS OPEN

NEUROBIOLOGIST BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE

Applications are invited to fill a permanent staff position in the Division of Neurosciences. We are seeking an exceptionally talented scientist actively engaged in experimental neurobiology at the cellular or molecular level. This investigator should have interdisciplinary training, be at least 2 years postdoctoral, and expect to develop an independent program in an emerging area of neuroscience. The Division of Neurosciences is a highly diversified group of 13 research teams engaged in studies ranging from genetics and neurochemistry to neuroanatomy and biophysics. *The City of Hope, an Equal Opportunity Employer*, is a nonprofit, nonsectarian institution begun 70 years ago and maintained by a vigorous nationwide fund-raising effort. Its scenic campus is located in the foothills of suburban Los Angeles County. Send curriculum vitae, bibliography, and summary of research goals to: **Dr. Donald A. McAfee, Chairman, Division of Neurosciences, Beckman Research Institute, Duarte, Calif. 91010.**



University of Pennsylvania Department of Biology NEUROSCIENTIST

Applications are invited for the position of assistant professor of biology. Candidates should have demonstrated their potential for initiating and sustaining an excellent research program in any aspect of neuroscience.

Please send curriculum vitae, including the names of three references, to:

**Assistant Professor Search Committee
Office of the Chairman
Department of Biology
University of Pennsylvania
Philadelphia, Pennsylvania 19104**

An Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGIST

A tenure-track position will be available in the Department of Physiology and Biophysics at the University of Illinois at Urbana-Champaign, effective August 1985. The Department of Physiology and Biophysics is a component of both the College of Medicine and the College of Liberal Arts and Sciences at Urbana-Champaign. The appointment is expected to be made at the level of either an assistant or associate professor. Candidates must have a Ph.D. and/or M.D. degree with demonstrated ability and commitment to both teaching and development of a strong independent research program. While the specific area of research interest is unrestricted, the successful candidate will be expected to participate in the delivery of the systems and integrative physiology curriculum to medical and graduate students on this campus. Salary is negotiable and will be commensurate with experience. Please provide curriculum vitae and the names of at least three individuals who may be contacted for letters of reference. Applications should be completed not later than 1 November 1984 and sent to: **Dr. John E. Zehr, Chairman of Physiology Search Committee, 524 Burrill Hall, University of Illinois, 407 South Goodwin, Urbana, Ill. 61801. Telephone: 217-333-7393.**

The University of Illinois is an Equal Opportunity and an Affirmative Action Employer.

PLANT CELL AND MOLECULAR BIOLOGY UNIVERSITY OF GEORGIA

The Botany Department of the University of Georgia is accepting applications for one or two faculty positions in the general area of plant cell and/or molecular biology. The department has an established program in this area of plant sciences. Appointments can be made at any academic level but it is anticipated that at least one of these positions will be filled at the senior level. Successful candidates will be expected to maintain an active research program, contribute to the teaching efforts of the department, and participate in the University of Georgia Center for Plant Cell and Molecular Biology.

Applicants should submit curriculum vitae, statement of research interests, and arrange to have three letters of reference sent to: **Dr. Alan Jaworski, Chairman Search Committee, Department of Botany, University of Georgia, Athens, Ga. 30602 by 15 November 1984.**

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

POSITIONS OPEN

PHYSIOLOGICAL PSYCHOLOGY. Postdoctoral associate in behavioral neuroscience to study forebrain mechanisms involved in learned cardiovascular adjustments. Prefer background or interest in unit recordings or retrograde tracing techniques. Also, opportunity for collaborative research in aging and/or neuropeptide involvement in learned behaviors (classical conditioning). Salary competitive. Begin 1 December 1984. Psychology, neurobiology, or neuropharmacology. Ph.D.'s contact: **D. A. Powell, Director, Neuroscience Laboratory (151A), VA Hospital, Columbia, S.C. 29201; telephone: 803-776-4000, extension 125. Equal Opportunity Employer.**

The Department of Botany at Miami University is seeking applicants in **PLANT MOLECULAR BIOLOGY, BIOTECHNOLOGY OR RELATED FIELDS** for a tenure-track position beginning August 1985. Candidates must have a Ph.D. degree; postdoctoral research experience is desirable. The successful candidate will be expected to develop and maintain an active research program, to develop one or more advanced courses, and to participate in undergraduate and graduate teaching. Applicants should submit curriculum vitae, transcripts, and a statement of research and teaching interests, and should arrange to have sent three letters of recommendation to: **Professor Karl Mattox, Department of Botany, Miami University, Oxford, Ohio 45056.** Deadline for applications is 1 December 1984. *Miami University is an Equal Opportunity/Affirmative Action Employer.*

PLANT MOLECULAR BIOLOGY UNIVERSITY OF CALIFORNIA, LOS ANGELES

The Department of Biology at UCLA invites applications for a faculty appointment in plant molecular biology to begin 1 July 1985. The appointment will preferably be made at the assistant professor level, but more advanced candidates will also be considered for a higher level appointment. Candidates must have research interests and experience in molecular aspects of the development/biochemistry/regulation of higher plants as well as a commitment to teaching both undergraduate and graduate students. Please send curriculum vitae, list of three referees, and a statement of research interests to:

**Dr. E. M. Tobin, Chair
Plant Molecular Biology Search Committee
Biology Department
UCLA
Los Angeles, Calif. 90024**

Applications should be received by 15 November 1984 to be considered. *UCLA is an Equal Opportunity/Affirmative Action Employer and we welcome applications from women and minorities.*

Postdoctoral Associate at MIT Molecular Genetics

Analysis of mutational spectrum of the hprt locus in human T-lymphocytes. Experience in gene cloning, cDNA library construction and sequencing desired. Position available immediately; salary \$20,000-\$25,000 depending on experience.

**Please send curriculum vitae and names of three references to:
Prof. William G. Thilly, Massachusetts
Institute of Technology, E18-666,
Cambridge, MA 02139. An equal
opportunity/affirmative action
employer.**

MIT

POSITIONS OPEN

PLANT PATHOLOGIST/BIOCHEMIST. Applications are invited for an 11-month, tenure-track appointment as assistant professor. This position will be 100 percent research, emphasizing the biochemical mode of action of disease control chemicals, particularly fungicides, and mechanisms of resistance in plant pathogens to these compounds. Other research areas include the metabolic fate of chemicals in pathogens, plants, nontarget organisms, and the environment; and the biochemistry of detoxification and selective toxicity. The research should be supportive of and cooperative with other programs in the college on the biology and control of fruit and vegetable diseases. Qualifications: A Ph.D. degree in a plant science, biochemistry, or a related discipline. Training or research experience in plant pathology, plant physiology, or pesticide behavior are desirable. Send curriculum vitae, and transcripts, and the names of three references by 15 December 1984 to: **Dr. T. J. Burr, Department of Plant Pathology, New York State Agricultural Experiment Station, Cornell University, Geneva, N.Y. 14456. Cornell University and State University of New York are committed to an Affirmative Action Program to seek applications from women and members of minority groups.**

POSTDOCTORAL; RESEARCH ASSOCIATE; and ASSISTANT and ASSOCIATE PROFESSOR (tenure-track) positions available in developmental biology research program, with emphasis on cell-connective tissue interactions. Prefer strong background in biochemistry, cell and molecular biology. Excellent opportunities for collaboration with departmental and campus-wide research programs. M.D. or pathology certification not required. Send curriculum vitae and names of three references to: **Chairperson, Department of Pathology and Laboratory Medicine, c/o Millie Geiger, Department Administrator, University of Wisconsin Medical School, 516 S.M.I. 1300 University Avenue, Madison, Wis. 53706. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOW. protein physical chemist to investigate domain structure, molecular interactions, and thermal stability of human plasma proteins (fibrinogen, complement, protease inhibitors) using fluorescence, DSC, HPLC, sequencing, and so on. Salary \$18,000 per year or more depending on experience. Send curriculum vitae now to: **Dr. K. C. Ingham, American Red Cross Plasma Derivatives Laboratory, 9312 Old Georgetown Road, Bethesda, Md. 20814.**

POSTDOCTORAL FELLOW. An opening exists with a group focusing strongly on protein biochemistry and protein (including apolipoprotein)-lipid interactions. Structure-function relationships will be investigated from the perspective of biological relevance. Applicants must have a Ph.D. or equivalent training and appropriate prior postdoctoral training to indicate familiarity with the established methodologies for protein separation, isolation, characterization, and functional studies relating to cholesterol transport. Submit complete résumé and names of three references to: **Dr. R. T. Holzbach, G.I. Research Unit, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL FELLOW and M.S.-level RESEARCH ASSISTANT with experience in monoclonal antibody production to study differentiation in human colon cancer, cell surface markers, and oncogene expression. Send résumé listing skills, references, and career objectives to: **Norman Zamcheck, M.D., Mallory Institute of Pathology Foundation, 784 Massachusetts Avenue, Boston, Mass. 02118. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION in retinal physiology to use patch clamp techniques to record from identified bipolar and ganglion cells in culture. Available 1 March 1985 for 3 years at \$19,300 per annum plus health insurance. Send curriculum vitae and two letters of reference to: **G. L. Fain, Department of Ophthalmology, JSEI, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024.**

POSTDOCTORAL POSITION available immediately for 2 years in research group studying eukaryotic gene regulation using recombinant DNA techniques. Experience in molecular biology, cell biology, or genetics is desirable. Qualified individuals should send recent curriculum vitae and the names of three references to: **Dr. Edward M. Berger, Biology Department, Dartmouth College, Hanover, N.H. 03755. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH POSITION
IMMUNOLOGY
IMMUNOCHEMISTRY
INFECTIOUS DISEASES**

The Veterinary Infectious Disease Organization (VIDO), University of Saskatchewan, has a position for an immunologist with a strong interest in immunochemistry and immunopotentiality to participate in research programs on economically important diseases of food-producing animals. Major projects are in the area of bacterial pneumonias and viral enteritis of cattle and swine and viral/bacterial synergism. Projects are under way on mechanisms of immunity, and potentiation of the immune response to a variety of natural and synthetic antigens. Applicants should have a degree in microbiology or veterinary medicine, together with a Ph.D. in immunology and an interest and experience in at least one of the following areas: Immunopotentiality of immune responses to natural and synthetic viral and bacterial antigens, serological techniques, and assays for humoral and CMI responses. The successful candidate will be involved in one or more of the above projects with ample opportunity to initiate new projects involving diseases of gastrointestinal and respiratory systems. A strong interest in the application of modern immunological techniques to the solution of problems related to the diagnosis and control of infectious diseases of animals is essential.

Inquiries and applications should be directed to:

**S. D. Acres, D.V.M., M.P.V.M., Ph.D.
Director**

**Veterinary Infectious Disease Organization
124 Veterinary Road
Saskatoon, Saskatchewan, Canada S7N 0W0
Telephone: 306-966-7465**

or

**L. A. Babiuk, B.S.A., M.Sc., Ph.D.
Department of Veterinary Microbiology
Western College of Veterinary Medicine
University of Saskatchewan
Saskatoon, Saskatchewan, Canada S7N 0W0
Telephone: 306-966-7214**

FACULTY RESEARCH LEAVE AT ARGONNE

Argonne National Laboratory, one of the U.S. Department of Energy's major research and development centers, invites inquiries and applications to its Program of Faculty Research Leave at Argonne (FRLA). This Program enables faculty members on sabbatical leave from U.S. universities to collaborate in Argonne research programs in the basic physical and life sciences, mathematics, computer science, and engineering, as well as in a variety of applied research programs relating to coal, conservation, environmental impact, fission, fusion, and solar energy. Typical financial support remitted to the university for these appointments includes 50% of salary and fringe benefits for nine months of the appointment and 100% of the summer salary and fringe benefits.



Additional information may be obtained from: ARGONNE DIVISION OF EDUCATIONAL PROGRAMS, Bos D-55, 9700 South Cass Avenue, Argonne, IL 60439. Or Call (312) 972-3365

An Affirmative Action/Equal Opportunity Employer

MOLECULAR BIOLOGIST ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Pharmacology and Cell Biophysics of the University of Cincinnati College of Medicine is inviting applications for a tenure-track position at the assistant/associate professor level. Training in molecular biology is required. The major criterion for selection will be research excellence. Teaching duties will be minimal. Candidates will be expected to establish an independent research program. Research direction should complement a department whose main interest is in various aspects of muscle regulation with emphasis on muscle proteins, calcium regulation and membrane proteins. A Program Project Grant (Cellular Mechanisms of Heart Failure) and Training Grant (Cardiovascular Biology) provide major support for research and training. Send curriculum vitae, names of three references and a statement of research goals by November 1, 1984 to:

**Dr. Richard L. Jackson
Molecular Biology Search Committee
Department of Pharmacology and Cell Biophysics
University of Cincinnati College of Medicine
231 Bethesda Avenue
Cincinnati, Ohio 45267-0575**

*An Equal Opportunity/
Affirmative Action Employer*

Postdoctoral Scientist/ Tumor Cell Biochemist

The Department of Tumor Biology at Smith Kline & French Laboratories, Located in suburban Upper Merion, Pennsylvania, is in search of an outstanding individual to join a multidisciplinary team seeking novel therapeutic agents for the treatment of human colon carcinoma. The successful candidate will join a newly established effort studying several aspects of the pathogenesis of colon adenocarcinoma. We are interested in expanding our investigations on the role of the contents of the colonic lumen (bacteria, bacterial structures and metabolites) on the biology and biochemistry of the colon mucosa.

Specifically, the successful applicant will study:

- the stress-response ("heat-shock" proteins) in primary cultures of normal and tumorigenic (human) colon epithelial cells.
- the regulation of the epithelial cell stress-response by the contents of the colonic lumen.
- the role of stress proteins in drug resistance.
- the participation of stress proteins in the expression of tumorigenic and metastatic properties.

Candidates are required to have:

- a Ph.D. in Biology/Biochemistry.
- substantial research experience and detailed familiarity with the biochemistry of the stress-response either in prokaryotic or eukaryotic systems.
- experience in a repertoire of standard biochemical techniques including those required for protein isolation and purification.
- a significant publication record.
- clear and concise communication skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your CV and names of three references to: Mr. Walter B. Flagg, SmithKline Beckman Corporation, 1558 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

POSITIONS OPEN

POSTDOCTORAL POSITION for recent Ph.D. or M.D., U.S. citizen or permanent resident, available immediately, supported by NIH training grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology (including radiation biology), or cancer drug development (organic synthesis). Application deadline: 12 November 1984. Send résumé indicating area(s) of interest and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912; telephone: 401-863-3114. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL OPPORTUNITY

Postdoctoral research position is available immediately to study the metabolism and cell biology of biotin and its relationship to inherited vitamin-dependent carboxylase deficiencies. Strong background in biochemistry and/or cell biology required. Please send curriculum vitae and three references to: **Barry Wolf, M.D., Ph.D., Department of Human Genetics, Medical College of Virginia, P.O. Box 33—MCV Station, Richmond, Virginia 23298-0001. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to investigate regulation of cell surface receptors involved in heme transport to the liver. Candidates with a Ph.D. in biochemistry, molecular or cell biology are preferred. Studies will include use of cell culture, isolation and characterization of membrane receptor proteins using monoclonal antibodies, and cDNA cloning and sequencing. Training in these areas can be provided. Salary negotiable. Send curriculum vitae and names of references to: **Dr. William T. Morgan, Department of Biochemistry, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, Louisiana 70112. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available 1 November 1984 to investigate structure and function of ribosomal peptidyltransferase and translocation active centers using recombinant DNA, hybridoma, and cross-linking techniques. Send curriculum vitae and references to: **Robert R. Traut, Department of Biological Chemistry, School of Medicine, University of California, Davis, Calif. 95616; telephone-916-752-3354. The University of California is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION, Recent Ph.D. available immediately. Research training will be in the biochemistry/cell biology of cell differentiation and gene expression, and regulation and function of cyclic AMP-dependent protein kinase. Experience in protein chemistry/enzymology tissue culture. Immunocytochemistry preferred. Write or call: **Dr. Alice Y.-C. Liu, telephone-201-932-3972, Department of Biological Science, Rutgers University Nelson Biological Laboratories, Piscataway, N.J. 08854.**

POSTDOCTORAL POSITION IN IMMUNOLOGY available immediately to study genetics and biochemistry of tumor cell surface antigens and/or immune mechanisms involved in animal disease. Prefer recent Ph.D. or D.V.M. with experience in biochemistry and immunology. Submit statement of interests, curriculum vitae, and names of three references to: **Gerald N. Callahan, Department of Pathology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colo. 80523. Colorado State University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN MOLECULAR GENETICS

Positions are available dealing with the characterization of clones for NaK ATPase, globin gene expression, and characterization of androgen-regulated genes of the mouse. Experience in recombinant DNA is desirable. Send résumé to: **Jerry B. Lingrel, Ph.D., University of Cincinnati, College of Medicine, Microbiology and Molecular Genetics Department, Cincinnati, Ohio 45267. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS. Immediate and future openings. Regulatory aspects of phospholipid and fatty acid biosynthesis and surfactant phospholipid secretion in developing lung using in vivo and in vitro models. Experience in lipid biochemistry, protein purification, or tissue culture desirable. Apply with curriculum vitae and names of references to: **Seamus A. Rooney, Ph.D., Department of Pediatrics, Yale University, P.O. Box 3333, New Haven, Conn. 06510.**

POSITIONS OPEN

POSTDOCTORAL POSITION available starting 1 January 1985 to investigate the structure and function of ribosomes and related nucleoprotein assemblies. Techniques in current use include neutron scattering, NMR (500 MHz), and x-ray crystallography. Preference given to recent Ph.D.'s in chemistry, biochemistry, or biophysics with backgrounds and interest in the structures and properties of nucleic acids and proteins. Send curriculum vitae and names of three references before 1 December 1984 to: **Professor Peter Moore, Department of Chemistry, Yale University, P.O. Box 6666, New Haven, Conn. 06511.**

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study effect of oxygen free radicals on isolated cardiac subcellular fractions and the intact heart. Two-year NIH-funded position. Send curriculum vitae and three letters of recommendation to: **Dr. Michael L. Hess, Box 281, Department of Medicine, Cardiology Division, Medical College of Virginia, Richmond, Va. 23298.**

POSTDOCTORAL POSITION. Open for studying molecular mechanism of gene expression in eukaryotic and prokaryotic systems with biophysical, biochemical, and genetic engineering techniques. Send résumé and three letters of recommendation to: **Professor Cheng-Wen Wu, Department of Pharmacological Sciences, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK Number 204-84.**

POSTDOCTORAL POSITIONS—available for study of primate viruses. Projects include: (i) Molecular basis for *Herpesvirus saimiri* oncogenicity. (ii) Use of herpesviruses as vectors for gene expression in vitro and in vivo. (iii) Retroviruses from macaques with AIDS. Molecular biology background needed and broad biological interests helpful. Ph.D., D.V.M., or M.D. Appointment in Department of Microbiology and Molecular Genetics, Harvard Medical School. Laboratory set in rural Southborough. Send curriculum vitae and references to: **Dr. Ronald Desrosiers, Harvard Medical School, New England Regional Primate Research Center, Southborough, Mass. 01772.**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN PRIMATE REPRODUCTIVE ENDOCRINOLOGY

Available immediately to Ph.D. to study steroid production by fetoplacental unit in vivo during baboon pregnancy. Experience with primates not necessary but background in reproductive endocrinology essential. Send curriculum vitae to:

**Gerald J. Pepe, Ph.D.
Department of Physiology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, Va. 23501**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN PROTEIN CHEMISTRY

Research involves studies of bone-specific proteins, and proteins of iron metabolism. Projects include isolation, structural characterization, and physical chemistry of bone-specific protein and cellular metabolism of protein of iron transport and storage, for example, assembly and turnover of ferritin cultured myocytes. Send curriculum vitae and three references to: **Dr. Kenneth G. Mann or Dr. Robert C. Woodward, Department of Biochemistry, Given Building, University of Vermont, College of Medicine, Burlington, Vt. 05405. The University of Vermont is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral position is available to study transcriptional and translational control of heterologous molecules in microinjected *Xenopus* oocytes. A background in recombinant DNA and/or monoclonal antibodies is preferred but not required. Pertinent references include: *Cell* 27:183, *JBC* 258:4864, *Mol. Cell. Biol.* 3:2131, *JMB* 173:227. Send curriculum vitae and three letters of reference to: **Dr. Joel D. Richter, Cell Biology Group, c/o personnel office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

An Equal Opportunity/Affirmative Action Employer, M/F/H.

POSITIONS OPEN

Postdoctoral Position available for biochemist, biologist, or chemist. Characterization of bacteria using multiparameter fluorescence techniques. Strong background in immunoassay and enzymatic methods of analysis is essential. Minimum salary of \$20,000. Send curriculum vitae and names of three references to: **Professor Isaiah M. Warner, Department of Chemistry, Emory University, Atlanta, Georgia 30322. Applications from women and minority groups are encouraged. Emory University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. Molecular genetics of chromosome replication, partitioning, and cell division in *Escherichia coli* [see *Mol. Gen. Genet.* 193:263(1984)]. Approximately \$18,000 per year, 1 January 1985 to 31 December 1986. Experience in bacterial genetics and recombinant DNA essential. Send curriculum vitae and names of three references to: **Dr. Peter Kuempel, MCDB Box 347, University of Colorado, Boulder, Colo. 80309; telephone: 303-492-7952. The University of Colorado, Boulder, is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION Tumor Virology

Available immediately to study roles of SV40 T Ag and the associated p53 host tumor antigen in oncogenic transformation, studies especially involving biochemical and protein chemical techniques. U.S. citizenship or permanent residency required because funding is through an NIH training grant. Send curriculum vitae and names of three references to:

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

POSTDOCTORAL SCIENTIST TRACE ELEMENT BIOGEOCHEMISTRY

The Academy of Natural Sciences' Benedict Estuarine Research Laboratory (BERL) has an immediate opening for a postdoctoral scientist interested in trace metal interactions with biota and transport through estuarine ecosystems. Successful applicant will interact with a small group of geochemists and biologists studying arsenic transformation and transport. Ample opportunity for research in the applicant's area(s) of interest. BERL is a small research laboratory located on the Chesapeake Bay, approximately 40 miles from Washington, D.C. Initial appointment is for 1 year, with possible extension to 2 years. Please call for information or submit curriculum vitae, summary of research interests, and names, addresses, and telephone numbers of three references to: **James G. Sanders, Benedict Estuarine Research Laboratory, Benedict, Md. 20612; telephone: 301-274-3134.**

Harvard University: The Department of Psychology and Social Relations is soliciting applications, or nominations, for a **TENURED PROFESSORSHIP** in the general area of **PSYCHOPATHOLOGY OR PERSONALITY**. Inquiries and current curriculum vitae, including the names of up to five referees familiar with the candidate's work, should be directed to: **Sheldon H. White, Chair, Psychology and Social Relations, 33 Kirkland Street, Cambridge, Mass. 02138. We are an Equal Opportunity Employer.**

Harvard University: The Department of Psychology and Social Relations is soliciting applications, or nominations, for a **TENURED PROFESSORSHIP** in the area of **PHYSIOLOGICAL OR BIOLOGICAL PSYCHOLOGY**. Inquiries and current curriculum vitae, including the names of up to five referees familiar with the candidate's work, should be directed to: **Sheldon H. White, Chair, Psychology and Social Relations, 33 Kirkland Street, Cambridge, Mass. 02138. We are an Equal Opportunity Employer.**

PSYCHIATRIST-INVESTIGATOR needed by Department of Psychiatry and Neurology to direct a research program in psychopharmacology. Substantial resources in space and equipment are available at Tulane University School of Medicine and New Orleans Veterans Administration Medical Center. Joint appointment available in Department of Pharmacology. Candidate must be capable of initiating own research at both clinical and bench levels. Curriculum vitae should be sent to: **Joseph B. Green, M.D., Chairman, Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112 by 30 October 1984. Tulane is an Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.**

M.S., Plant Genetics

Research Opportunity

Further expansion of the Plant Genetics department of Pfizer Central Research has produced an opening for an M.S. Cell or Molecular Biologist. The successful candidate will work at the interface of molecular biology (vector development) and cell biology (development of the recipient cells and delivery technology) as an integral part of a research team committed to cereal transformation. Candidates with skills in Ti plasmid biology, microinjection, protoplast transformation, liposome technology, or plant vector development are encouraged to apply.

This unique position offers an excellent opportunity for professional recognition and career growth within a stimulating working environment. We offer an excellent salary, benefit and relocation package, plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, including the names, addresses and phone numbers of three professional references to: Mr. Charles P. Norris, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal
opportunity employer

ASSISTANT PROFESSORSHIPS

The Department of Biological Sciences of Oakland University invites applications for two tenure-track positions to begin Fall, 1985. Salaries will be competitive.

MOLECULAR AND CELLULAR BIOLOGY

Applicants must have a background in recombinant DNA technology and postdoctoral research experience and publications in at least one of the following areas: virology, eukaryotic molecular genetics, developmental genetics or immunology. Opportunities exist for collaboration with other faculty working in the area of recombinant DNA. The appointee will be required to maintain an active research program and to offer courses in one or more of the following areas: virology, immunology or molecular genetics.

ANATOMY

Applicants must have postdoctoral research experience and publications in one of the following areas: neuroanatomy, visual biology or cell biology. Opportunities exist for collaboration with research-oriented hospitals in area. The appointee will be required to maintain an active research program and teach a one-semester course in Human Anatomy for nursing students and an advanced course in an area of the candidate's choice for the second semester.

The Department of Biological Sciences is a modern, well-equipped department with existing emphasis on cellular and molecular biology that offers undergraduate and graduate degrees. The department consists of 22 full-time faculty committed to excellence in research and teaching. Oakland is a state supported university on a 1,400 acre campus 25 miles north of Detroit.

Applicants should submit curriculum vitae, a brief description of their research plans and have three referees send letters of recommendation before December 15, 1984 to:

Dr. N. J. Unakar, Chairperson
Department of Biological Sciences
Oakland University
Rochester, Michigan 48063

AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER

RESEARCH SCIENTIST

Battelle, Pacific Northwest Laboratories is seeking applications from scientists with backgrounds in xenobiotic interactions for our Applied Ecology group in Richland, Washington, and for our Marine Sciences Laboratory in Sequim, Washington.

Applied Ecology Section - Richland, Washington
Successful candidates will have the ability to initiate and contribute to programs dealing with interactions of xenobiotics with fresh-water and/or terrestrial organisms and should have a strong background in physiological mechanisms relating to organism response to toxic substances or environmental organism distribution and abundance. Skills in quantitative analysis and experimental design are also desired. The successful scientist will be expected to interact with a multidisciplinary research team at the research laboratories in Richland, Washington, to develop innovative research programs in aquatic toxicity and food chain transfer of xenobiotics.



Pacific Northwest Laboratories

Marine Sciences Section - Sequim, Washington

The Marine Sciences Section invites applications from scientists with ability to initiate or contribute to programs dealing with interactions of xenobiotics with estuarine and/or marine organisms. The applicants should have a strong background in biochemical and physiological mechanisms relating to organism response (particularly adaptive response) to toxic substances or environmental perturbations. Preference will be given to individuals having worked at the cellular and molecular levels. The successful scientist will be expected to interact with multidisciplinary research teams at the Marine Research Laboratory in Sequim, Washington, to develop innovative research programs dealing with fate and effects of xenobiotics in estuarine and/or marine food chains.

Interested candidates with a PhD and technical leadership demonstrated by a strong publication and proposal record are invited to submit their curriculum vitae, a brief statement of research interests, and the names of three references to:

Loren P. Henderson, Manager-Employment,
Battelle-Northwest, P.O. Box 999, Richland, WA 99352.

U.S. Citizenship Required.
An Equal Opportunity Employer M/F.

POSITIONS OPEN

PROFESSOR AND CHAIRMAN DEPARTMENT OF ANATOMY

The Faculty of Medicine, University of Alberta, invites applications for the position of professor and chairman, Department of Anatomy. The department conducts undergraduate programs for students in medicine, dentistry, and pharmacy and offers M.Sc. and Ph.D. programs.

Applicants should have a well-developed research program and be able to attract extramural grants. The programs of the Alberta Heritage Medical Research Foundation provide an ideal opportunity to attract new staff and develop innovative areas of research.

The appointment will be at the full professor rank with salary (floor \$48,010) commensurate with qualifications and experience. Applicants should apply enclosing curriculum vitae and the names of three referees by 30 November 1984 to:

Dr. Douglas R. Wilson
Dean, Faculty of Medicine
13-117 Clinical Sciences Building
The University of Alberta
Edmonton, Alberta, Canada T6G 2G3

The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

PROFESSOR AND CHAIRMAN DEPARTMENT OF PHYSIOLOGY

The Faculty of Medicine, University of Alberta, invites applications for the position of professor and chairman, Department of Physiology, the appointment to be effective 1 July 1985. The department consists of 14 full-time academic staff, 26 graduate students and postdoctoral fellows, and adequate technical and secretarial staff. The research areas of the department involve a wide area in organ and cellular physiology.

Applicants should have a well-developed research program and be able to attract extramural grants. The programs of the Alberta Heritage Foundation for Medical Research provide an ideal opportunity to attract new staff and to develop innovative areas of research.

The appointment will be at the full professor rank with salary (floor \$48,010) commensurate with qualifications and experience. Applicants should apply enclosing curriculum vitae and the names of three referees by 30 November 1984 to:

Dr. Douglas R. Wilson
Dean, Faculty of Medicine
13-117 Clinical Sciences Building
University of Alberta
Edmonton, Alberta, Canada T6G 2G3

The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

PUBLIC HEALTH CHEMIST III CHEMISTRY/TOXICOLOGY LABORATORY

Supervision of six chemists, method development in drug and occupational toxicology, and budget administration. Requires possession or eligibility for California state license as clinical chemist or clinical laboratory toxicologist. Salary \$34,060 to \$41,288. Apply to: **B. Gatlin, Personnel, Ward 13, SAN FRANCISCO GENERAL HOSPITAL MEDICAL CENTER, 1001 Potrero Avenue, San Francisco, Calif. 94110; telephone: 415-821-8084. An Equal Opportunity Employer.**

THE UNIVERSITY OF SYDNEY RESEARCH ASSISTANT/POSTDOCTORAL FELLOW Reference Number 35.03 NEUROBIOLOGY RESEARCH CENTRE

The appointee should have at least an honours degree or equivalent and have expertise in tissue culture as well as in ancillary immunological techniques. Appointment to 31 December 1985 in the first instance with possibility of renewal to a total of 3 years.

Salary according to qualifications and experience in one of the ranges; A\$17,657 to A\$23,903 per annum. Applications, quoting reference number, including curriculum vitae and the names of two referees, to: **the Registrar, University of Sydney, N.S.W. Australia 2006** by 29 October 1984.

POSITIONS OPEN

RESEARCH ASSOCIATE

Conduct research in the area of the molecular biology of muscle cell differentiation and development with emphasis on gene structure and function. Supervise postdoctoral fellows and technicians engaged in similar research.

Requirements include Ph.D. in molecular biology or related field with thorough knowledge of cell biology and tissue culture techniques; recombinant DNA technology including cDNA cloning, construction of genomic libraries; DNA sequencing; expression of transfected genes in eukaryotic cells; in vitro macromolecular synthesis (in vitro transcription and translation and 1 year of research experience in the above areas).

Salary is \$20,000 per year, 40 hours a week.

Please send résumé only to: **Mr. Willis, Job Order Number 4675, Division of Employment Security, Hurley Building, Government Center, Boston, Mass. 02114.**

HUMAN EATING BEHAVIOR RESEARCH ASSOCIATE OR POSTDOCTORAL FELLOW

An interdisciplinary postdoctoral or research associate position is available at the University of Pennsylvania to join in the study of human eating behavior. Applicants should have the Ph.D. in psychology, physiology, nutrition, or related fields or the M.D. degree. The research and training opportunity involves study of the eating behavior of lean and obese humans in the laboratory and in the subject's natural environment by means of a newly developed oral sensor which can monitor all chews and swallows throughout the day. The experience offers a collaboration with Drs. Eliot Stellar and Albert J. Stunkard and other members of the Human Feeding Laboratory and the Obesity Research Group at the University of Pennsylvania. Please send letters describing your interests, and qualifications, your curriculum vitae, and three letters of recommendation to: **Dr. Eliot Stellar, 243 Anatomy-Chemistry Building/G3, University of Pennsylvania Medical School, Philadelphia, Pennsylvania 19104.**

An Equal Opportunity/Affirmative Action Employer.

RESEARCH FACULTY POSITION available in pharmacology, Ph.D. or M.D., experienced in working with anesthetics and/or cardiovascular pharmacology. Familiarity with Gould polygraph, Beckman analyzers, and Apple II computers desirable. Involves research with new anesthetic combinations. Available immediately, salary negotiable. Send curriculum vitae and two references to: **Dr. Frieda Rudo, Department of Pharmacology, University of Maryland School of Dentistry, 666 West Baltimore Street, Baltimore, Maryland 21201. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH HISTOLOGIST BONE METABOLISM—Ph.D.

An individual is sought with demonstrated expertise in bone cell culture and quantitative histology of bone. Minimum requirement is a doctorate (Ph.D.). This position involves expansion of an existing research team involved in a variety of projects concerning calcium metabolism and metabolic bone disease. Clinical research is conducted in collaboration with Brookhaven National Laboratory. Salary is competitive and is funded by Nassau Hospital. Nassau Hospital is a 533-bed teaching hospital of the State University of New York at Stony Brook. Send curriculum vitae to: **John F. Aloia, M.D., Professor of Medicine; Chairman, Department of Medicine, Mineola, N.Y.**

RESEARCH POSITION—Available 1 January 1985. The Division of Radiation Oncology of the Department of Radiology, University of Texas Health Science Center at San Antonio, invites applications for a nontenure-track position of assistant professor (salary negotiable). Candidates with research expertise in cytogenetics (including sister chromatid exchange analysis) in mammalian cells in culture will be considered. Skill in morphological analysis of cells is desirable but not required. Interested applicants should send curriculum vitae, copies of selected recent publications, a brief statement of research interests, and names of three references to: **Dr. Martin L. Meltz, Department of Radiology, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE, position available immediately, to take part in isolation and genetic characterization of highly polymorphic, human repetitive DNA. A Ph.D. and experience with cloning and sequencing are required. Salary negotiable. Send curriculum vitae and three references to: **Dr. Theodore Krontiris, Cancer Research Center, 136 Harrison Avenue, Boston, Mass. 02111.**

RESEARCH AND DEVELOPMENT MANAGERS AGRICULTURAL/VETERINARY DIAGNOSTICS

AgriTech Systems, a biotechnology firm specializing in immunoassays for agricultural, veterinary, and food testing applications, has immediate openings for experienced, highly motivated scientists for assay design and development.

Ideal candidates will have a Ph.D. in biochemistry, immunology, microbiology, or virology with postdoctoral experience and a working knowledge of immunoassay design and optimization. Strong interest and experience in animal health care, agricultural, and food quality control applications is very desirable.

Salaries commensurate with experience, plus benefits and stock option opportunities. Please send résumé and compensation history in confidence to: **Nancy H. Smaha, Administrative Manager, AgriTech Systems, Inc., 58 Fore Street, Portland, Maine 04101.**



An Equal Opportunity Employer

SALES REPRESENTATIVES HOEFER SCIENTIFIC INSTRUMENTS

We seek bachelors or masters of science currently working in a laboratory or in sales. Candidates must have 2 years of experience with gel electrophoresis. Chicago and St. Louis territories are available. We will interview at the ASCB Meeting in Kansas City in November. Please send résumés with cover letters to: **Philip Snodgrass, Hoefer Scientific Instruments, Box 77387, San Francisco, Calif. 94107.**

VETERINARY BACTERIOLOGIST ASSISTANT OR ASSOCIATE PROFESSOR

The Department of Veterinary Microbiology and Parasitology in the College of Veterinary Medicine at Texas A&M University has a vacancy for an assistant or associate professor in the area of veterinary bacteriology. This is a full-time tenure-track position.

Applications will be considered from individuals with the Ph.D. degree. Possession of the D.V.M. degree and certification by the ACVM are desirable. The successful candidate will have proven research abilities as demonstrated by a publication record and extramural grant support in the area of bacterial diseases.

Rank and salary are negotiable and competitive.

Applications will be accepted until 1 November 1984, or until the position is filled. Applicants should submit curriculum vitae and three letters of references to:

Dr. I. R. Tizard
Professor and Head
Department of Veterinary Microbiology and Parasitology
College of Veterinary Medicine
Texas A&M University
College Station, Texas 77843

Texas A&M University is an Equal Opportunity/Affirmative Action Employer and is committed to provide equal opportunity for all persons seeking employment without regard to an individual's race, color, religion, sex, age, national origin, or nonjob-related physical or mental handicap.

VISITING/RESEARCH ASSISTANT PROFESSOR (Nontenure-track) faculty position in neuropharmacology of aging, interested in an interdisciplinary study of mechanisms of brain aging and Alzheimer's disease. Both basic and clinical aspects are being investigated. Major focus in neurochemistry and molecular biology. Send curriculum vitae and names of three references by 1 November 1984 to: **Dr. E. Giacobini, Professor and Chairman, Southern Illinois University School of Medicine, Department of Pharmacology, P.O. Box 3926, Springfield, Ill. 62708. An Equal Opportunity/Affirmative Action Employer.**

VICE PRESIDENT FOR CORPORATE AFFAIRS University Consortium

Applications and/or nominations are invited for the position of Vice President for Corporate Affairs of the Association of Universities for Research in Astronomy, Inc. (AURA). Headquartered in Washington, D.C., the 17-member university consortium manages and operates the National Optical Astronomy Observatories (Kitt Peak National Observatory, Cerro Tololo Inter-American Observatory and the National Solar Observatory) under contract with NSF, and the Space Telescope Science Institute under contract with NASA.

The Vice President for Corporate Affairs will perform a wide range of functions in managing AURA's corporate operations including interaction with AURA Board committees and liaison with visiting committees, with funding agencies, and with Center Directors on administrative and programmatic matters. The Vice President will function independently, within limits of delegated authority, on matters of prime contract administration, corporate fiscal management, corporate office operations, and implementation and interpretation of corporate policies.

A degree or equivalent experience in business, public, or educational administration and extensive work experience in a research-oriented organization are required; an advanced degree in a physical science and related work experience are desired. Training or experience is also desirable in such areas as contract negotiation and administration, business law, finance, personnel management, program management techniques, and management information systems. Salary range: \$47,000 - \$76,000, depending on experience and education.

Applications, accompanied by a resume and names and addresses of at least three professional references, or nominations with supporting statements, should be submitted no later than December 1, 1984, to:



Chairman, Search Committee
AURA, INC.
Suite 820
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037

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

NMR SPECTROSCOPIST

Sandoz, Inc. is responsible for pharmaceutical products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

Currently we seek a NMR Spectroscopist. The ideal candidate should be a recent Ph.D graduate or have equivalent training. Experience with NMR of biological/biochemical systems required.

Responsibilities include operation of high field spectrometers for routine spectral analysis and spectral-structural interpretation, developing research projects, and interaction in organic-biochemical studies.

The NMR Laboratory at Sandoz is presently equipped with JEOL 90Q and 100 MHz instruments, with a very high field spectrometer expected in 1985.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and excellent company-paid benefits. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please forward your resume with salary requirement in confidence to:



Personnel Manager
SANDOZ RESEARCH INSTITUTE
SANDOZ, INC.
Route 10 (403-1)
East Hanover, NJ 07936
An Equal Opportunity
Employer M/F/H

MOLECULAR BIOLOGY AT SMU

SMU has initiated a comprehensive development program for the DEPARTMENT OF BIOLOGY with the commitment of new positions, facilities and resources. The department expects to fill THREE TENURE-TRACK ASSISTANT PROFESSORSHIPS during the current academic year with individuals whose research interests and training are at the molecular level.

1. THE JAMES TRUSTEE ENDOWED ASSISTANT PROFESSORSHIP OF MICROBIOLOGY
2. ASSISTANT PROFESSOR OF DEVELOPMENTAL BIOLOGY
3. ASSISTANT PROFESSOR OF MOLECULAR GENETICS

Although these positions are broadly defined and will be filled on the basis of excellence, preference will be given to microbiologists working at the forefront of recombinant DNA technology, developmentalists working with *Drosophila* and molecular geneticists working with yeast.

Individuals will be expected to participate in the undergraduate program, supervise graduate students and develop a research program with extramural support. Please submit curriculum vita, description of research plans and the names of three references, indicating the position of interest, to: DR. P. DENNIS SMITH, CHAIRMAN, DEPARTMENT OF BIOLOGY, SOUTHERN METHODIST UNIVERSITY, DALLAS, TEXAS 75275. Review of applications will begin November 1, 1984.

SOUTHERN METHODIST UNIVERSITY

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RESEARCH ASSOCIATE

Postdoctoral position available immediately in ongoing project to study: Roles of cytoskeleton and newly synthesized protein in adrenal response to ACTH and in intracellular and intramitochondrial transport of cholesterol in adrenal cells (normal and transformed). Submit curriculum vitae and names of three references to: **Dr. Peter Hall, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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RESEARCH ASSOCIATE

A full-time biochemical research position involved with the development and quality control of radiolabeled monoclonal antibodies is available. Experience in tissue culture and HPLC preferred. Candidates should have a Ph.D. in biochemistry or immunology. Salary: \$20,000. Send résumé to: **Stanley J. Goldsmith, M.D., Director, Andre Meyer Department of Physics-Nuclear Medicine, THE MOUNT SINAI MEDICAL CENTER, One Gustave L. Levy Place, New York, N.Y. 10029. An Equal Opportunity Employer.**

RESEARCH ASSISTANT I to work in the area of bacteria-plant interaction. Responsibilities will include designing and performing experiments as well as collecting, analyzing, and writing reports of data. Candidates should have at least a B.S. degree in general microbiology. Experience in soil microbiology, recombinant DNA techniques, and plant pathology would be helpful. Salary starts at \$15,352. Send curriculum vitae and three references by 1 October to: **Search Committee for Bacteria-Plant Interactions, Department of Molecular and Cellular Biology, University of Arizona, Tucson, Arizona 85721.**

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SOLID EARTH GEOPHYSICIST. Faculty position at the Graduate Department of Scripps Institution of Oceanography and the Institute of Geophysics and Planetary Physics. Applications are invited for a tenure-track faculty position in the field of solid earth geophysics, including its theoretical and observational aspects. The position will involve graduate-level teaching and the supervision of graduate student research. Qualifications include a Ph.D. in one of the sciences and demonstrated excellence and independence in research. Weight will be given to evidence of superior teaching ability. An appointment at the assistant professor level is envisaged but qualified applicants at all levels will be considered. Associate or professional level candidates must demonstrate a strong research record in their specialty; assistant level candidates will be expected to show evidence of their potential by means of a publication record appropriate for their experience and in their letters of recommendation. Salary commensurate with qualifications and experience. Send letter of application, curriculum vitae, including research interests, and the names of three references to: **Chairman, Graduate Department A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, Calif. 92093.** Responses must be received by 30 November 1984. *An Equal Opportunity/Affirmative Action Employer.*

SUPERVISORY RESEARCH ENTOMOLOGIST or SUPERVISORY RESEARCH CHEMIST at GM-13 (\$36,327), GM-14 (\$42,928), or GM-15 (\$50,495); grade based on qualifications. One federal career civil service position with United States Department of Agriculture (USDA)-Agricultural Research Service, VTERL (Physiology and Biochemistry of Livestock Insects Research Unit), College Station, Texas. As research leader, will conduct research in physiology, endocrinology, and biochemistry. Must have knowledge and skill in protein chemistry to isolate, characterize, identify, and synthesize neuro-peptide hormones and other bioregulators. Expertise in modern techniques of protein sequencing preferred. Synthetic peptides and other bioregulators will be evaluated as potential insect control agents. Applicants should have experience in directing, planning, and implementing successful research programs. Ph.D. or equivalent education/experience required. Candidate must be U.S. citizen. *Equal Opportunity Employer.* Applications must be received by 13 November 1984. For application forms and procedures, contact: **USDA-ARS-PD-POB; Southern Region Section; Building 417, BARC-East; Beltsville, Md. 20705.** Telephone: 301-344-1508 (reference: SR-104-84).

POSITIONS OPEN

SYNAPTIC PHYSIOLOGIST. Tenure-track assistant professor position. Postdoctoral experience required. Must have research interests in basic mechanisms of neurotransmission at cellular/biochemical level and must develop an independent research program. Includes graduate and undergraduate teaching in physiology and neurobiology. Send curriculum vitae and three letters of reference to: **Dr. J. Rabii, Department of Biological Sciences, Rutgers University, Piscataway, N.J. 08854. An Equal Opportunity/Affirmative Action Employer.**

VERTEBRATE PALEONTOLOGIST. Curator: tenure-track position, 12-month appointment, rank commensurate with experience, salary up to \$29,000, Ph.D. required. Preference will be given to established candidates with demonstrated research, publication, teaching, field, and curatorial experience. Area of research emphasis preferred: Neogene and Quaternary mammals. Starting date: 1 January 1985. Closing date: 15 November 1984. In applying, send curriculum vitae, list of publications, a statement of research interests, and three letters of recommendation to: **Dr. Allan Linder, Chairperson of Search Committee, Idaho Museum of Natural History, Idaho State University, P.O. Box 8096, Pocatello, Idaho 83209.**

FELLOWSHIPS

HERBERT H. JASPER POSTDOCTORAL RESEARCH FELLOWSHIP IN NEUROSCIENCE available. Position provides 1 year's salary and use of the exceptional facilities of the Center for Research in Neurological Sciences. Recipient works closely with investigator of choice, within a large group currently studying a wide range of topics in the vertebrate nervous system. Further information and application forms available from: **Fellowship Committee, Centre de recherche en sciences neurologiques, Faculté de médecine, Université de Montréal, C.P. 6128, Succ. A, Montréal, Québec, Canada H3C 3J7.** Deadline: 31 December 1984.

POSTDOCTORAL FELLOWSHIPS: NIH-funded postdoctoral fellowships are available in the areas of immunology and molecular biology applying monoclonals, T cell clones, and cDNA technologies to neurological disorders. Send curriculum vitae and three references to: **Leslie P. Weiner, M.D., Department Chairman, Department of Neurology, University of Southern California School of Medicine, MCH 142, 2025 Zonal Avenue, Los Angeles, Calif. 90033. An Equal Opportunity Employer.**

WASHINGTON UNIVERSITY CENTER FOR CELLULAR AND MOLECULAR NEUROBIOLOGY FELLOWSHIPS

The Washington University Center for Cellular and Molecular Neurobiology is pleased to announce the availability of a limited number of fellowships for advanced postdoctoral work in neurobiology. The object of these special awards is to enable outstanding young neuroscientists to perform collaborative or even independent research in one or more laboratories associated with the center. Fellows of the center will be paid an annual salary that depends on years of experience and they will receive a budget for supplies. In general, each applicant should make arrangements with a scientist associated with the center, although this is not absolutely necessary in order to apply. A list of faculty members affiliated with the center is available on request. Applications should include a summary of background and training, a statement of proposed research, and three letters of reference. They should be addressed to:

**Dr. Gerald D. Fischbach
Center For Cellular and Molecular Neurobiology
Box 8108, Washington University School of Medicine
660 South Euclid Avenue
St. Louis, Missouri 63110**

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POSTDOCTORAL RESEARCH FELLOWSHIPS IN DIABETES-METABOLISM. Applications for 1985 and 1986 are being considered for postdoctoral fellowships in diabetes research (for example, hormonal control of glucose; ketone body and amino acid metabolism; insulin receptors and insulin action; immunologic aspects of diabetes and diabetic complications). For information, write: **John Gerich, M.D., Endocrine Research Unit, Mayo Clinic, Rochester, Minnesota 55905. An Equal Opportunity/Affirmative Action Institution.**

FELLOWSHIPS

C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIP

In diabetes research, molecular endocrinology, molecular biology, differentiation, immunology, structure and function of membranes, or lipid metabolism. Tenable for 2 years' after 1 July 1985 with a competitive stipend. Available to new Ph.D.'s or candidates with less than 2 years' postdoctoral training by 30 June 1985. Send curriculum vitae, transcripts, and three letters of reference preferably before 1 November 1984 to: **Dr. C.-H. Siu, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada M5G 1L6.**

ASSISTANTSHIP

GRADUATE TRAINING IN BIOCHEMISTRY AND BIOPHYSICS at the University of Hawaii. Join our active medical school department engaged in numerous research projects of interest and importance. Unique geographical and cultural setting. Predoctoral teaching and research **ASSISTANTSHIPS** available September 1985 to qualified applicants. Write to: **Chairman, Department of Biochemistry and Biophysics, University of Hawaii, Honolulu, Hawaii 96822. An Equal Opportunity Employer.**

SABBATICAL

CHINA SABBATICAL

The American Institute of Chemists (AIC) is sponsoring a 3- to 6-month sabbatical for a chemist in the People's Republic of China in 1985. It will include research and/or teaching at leading universities and scientific institutes in Beijing, Shanghai, or Canton. Travel to/from and within China and a living allowance furnished. Letter of application, curriculum vitae, and so forth must be received by 15 November 1984. Send to: **David A. H. Roethel, Executive Director, AIC, 7315 Wisconsin Avenue, Bethesda, Md. 20814.**

CONFERENCE

**FOGARTY INTERNATIONAL CENTER
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presents a conference on
ONCOGENES, CELL GROWTH, AND CANCER
14 November through 16 November 1984

This conference will be held at the NIH campus (Masur Auditorium, Building 10) and will focus on recent developments in the molecular biology of cancer. The list of speakers includes: S. Aaronson; D. Baltimore; M. Barbacid; S. Cohen; C. Croce; R. Erikson; D. Givol; J. Grotten; T. Hunter; J. Minna; G. Klein; P. Leder; A. Levinson; J. Nevins; Y. Nishizuka; E. Ruley; J. Schlessinger; G. Todaro; G. Vande Woude; M. Waterfield; R. Weinberg; and M. Wigler.

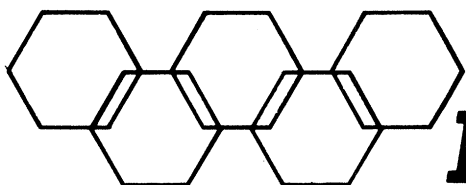
Organizing committee: D. Givol, D. Shemin, S. Aaronson. Registration is requested, but no fee is required. For further information contact:

**Francoise Arsenault
HCR
1605 T Street, NW
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NATIONAL CANCER INSTITUTE CANCER CONTROL SCIENCE ASSOCIATES PROGRAM

The Division of Cancer Prevention and Control, National Cancer Institute, National Institutes of Health (DCPC, NCI, NIH) is accepting applications for July 1, 1985 entry into the Cancer Control Science Associates Program (CCSAP). The primary purpose of this new program is to attract qualified individuals from a multiplicity of health science disciplines into the field of cancer control research. Up to five (5) individuals may be accepted as DCPC Science Associates for a three-year period of duty. In most cases, two years will be spent at the NCI working directly with individual preceptors on ongoing cancer prevention and control projects. Science Associates will also participate in formal in-house training in cancer prevention and control and may, in some instances, pursue specialized course work at selected academic institutions. A third year will be spent at one of the NCI-supported cancer preven-

tion and control programs located throughout the United States. Matching procedures will ensure that each DCPC Science Associate will be placed according to his/her professional training and interests.

Requirements for appointment are: 1) M.D., D.O., or doctorate in an allied or public health profession, biomedical or behavioral science, or equivalent; 2) A minimum of one year of post-doctoral training or experience at the time of application, which included familiarity with the basic fundamentals of scientific research methodology; and 3) academic-professional excellence supported by official transcripts and four letters of reference. [NOTE: Individuals with payback obligations to the National Health Service Corps Scholarship Program or other similar federal programs are not eligible for consideration.] DCPC Science Associates will occupy non-tenure Civil Service positions as professional staff.

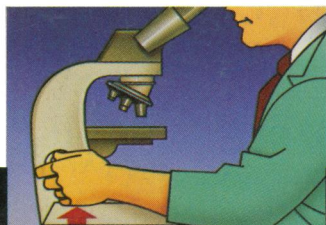
Current salaries for the first year for an M.D./D.O. or a Ph.D., respectively, are \$31,044 or \$25,489 per annum. Employment benefits include health and life insurance, sick and annual leave, relocation and travel expenses, and tuition expenses (if applicable).

To obtain program details and an application packet, SEND A POSTCARD ONLY with your printed name and home mailing address to: Ms. Nancy E. Garner, Program Coordinator, CCSAP, NIH/NCI/DCPC/CCAB, Blair Building, Room 4A01, Bethesda, MD 20205 or call (301) 427-8788. (Do NOT send letters, curriculum vitae, transcripts, reprints, etc. until you have received the information packet and reviewed the program details, eligibility requirements, and instructions for submission.) NIH is an Equal Opportunity Employer.

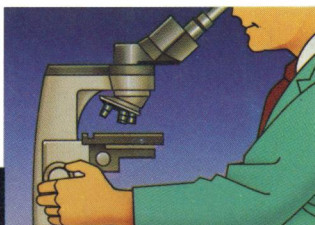
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