

superstring theories may take over the dominant role. So this might be an unfortunate time to draw attention to a book on gauge theories that is composed of lectures given two years ago. But it should be kept in mind that even if the prophecies concerning string theories turn out to be correct that will not make the study of gauge theories irrelevant—just as the advent of quantum mechanics has not made the study of classical dynamical systems irrelevant.

Progress in Gauge Field Theory offers an overview of the many aspects of gauge theories that is still useful today. The material can be grouped into three partly overlapping categories: classical gauge field theories, lattice gauge theories, and the renormalization group. In addition there are papers by Fröhlich and 't Hooft that do not quite fit into any of these categories.

The subject of classical gauge theories has blossomed in the last decade. It is one of the main areas of contact between mathematics and physics, as a paper by C. Taubes on the connection between Morse theory and gauge fields exemplifies.

Papers by Alvarez-Gaumé and by Stora on anomalies mark the transition from classical to quantized theory. Anomalies are a phenomenon of quantum field theory; they are extra terms containing Planck's constant as a factor that have to be added to the classical conservation laws. Nevertheless their form is determined by classical (cohomological) considerations.

With the subject of lattice gauge theory one is fully in the quantum world as determined by the (Euclidean) "sum over histories." To make this structure mathematically sensible, space-time is approximated rather brutally by a lattice. Thereby one gains one important advantage: quantum field theory is reduced to quadratures, which means that everything can in principle be computed by carrying out a large number of integrations.

The "Monte Carlo industry" tries to evaluate the necessary integrals numerically by a stochastic algorithm. It produces results that can be directly compared with experiment. A paper by B. Berg is an excellent survey of the calculation of particle ("glueball") masses by this method; it explains both the conceptual background and the techniques of computation. One of the virtues of the paper is that it does not try to mask the difficulties and uncertainties inherent in this game.

Lattice gauge theories can of course also be analyzed nonnumerically, and

many interesting results have been obtained by applying the tools of statistical mechanics. There are also problems that are specific to the lattice, particularly if one includes fermions. A paper by Gökeler and Joos that might become a standard reference on the subject presents a very clear and complete account of one solution to these problems.

The volume contains many interesting contributions on various other problems of lattice gauge theories. Papers by Lüscher and by Parisi are particularly original. The first points out a surprising relation between scattering amplitudes and finite size effects, and the second proposes improvements in the stochastic algorithms that have since been applied with promising results.

The lattice cutoff is, of course, supposed to be removed in the end. This is a highly nontrivial problem, and there is universal agreement that its solution will have to make use of the renormalization group à la Wilson and Kadanoff to study the flow of the effective interactions under a systematic elimination of the short wavelength modes.

Wilson himself gives an account of a recent innovation, the so-called "Monte Carlo renormalization group," which uses numerical methods to study the renormalization group flow.

The other papers in the book on the renormalization group are rigorously mathematical. Two papers by Gawędzki and Kupiainen give a glimpse of their work applying the renormalization group to the study of critical phenomena and to the construction of continuum quantum field theories (of the nongauge kind). A contribution by Balaban *et al.* gives a glimpse of another big enterprise that utilizes Wilson's ideas about the renormalization group for the construction of continuum quantum gauge theories. Both subjects have evolved considerably since 1983, and the actual work is too complicated to be described satisfactorily in such short papers. But the papers are useful guides to the ideas and to the literature.

Fröhlich presents in a coherent fashion a subset of his work (with collaborators) of recent years. The paper deals with random geometric objects like walks and surfaces and has led to important results in "ordinary" field theories (triviality of ϕ^4); its analysis of random surfaces also has shed new light on the basic physical problems of gauge theories, such as quark confinement. This last subject also touches upon the string theories that are so popular today. Fröhlich's contribution is self-contained and detailed enough to be understood with-

out burying oneself in the original literature.

Finally 't Hooft gives an account of his work on "planar field theories" including the proof of Borel summability of planar ϕ^4 . This is a tough and serious paper that does not spare the reader technical details. Though most of the work discussed in the paper has been published in original articles, the version given here may be more accessible.

On the whole the book contains a good cross section of the ideas and methods used in gauge theories and related fields. One approach that does not appear is the so-called stochastic quantization proposed by Parisi and Wu and further developed by Zwanziger and others, but it cannot be the purpose of such a book to cover everything. After two years the book remains fresh and useful for somebody who has some general knowledge of gauge theories and wants to penetrate deeper into the subject. It is particularly useful as a guide to the original literature. It belongs in any serious theoretical physics library.

ERHARD SEILER

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Books Received

Actinides. Chemistry and Physical Properties. L. Manes, Ed. Springer-Verlag, New York, 1985. x, 305 pp., illus. \$57.50. Structure and Bonding, 59/60.

Action Control. From Cognition to Behavior. Julius Kuhl and Jürgen Beckmann, Eds. Springer-Verlag, New York, 1985. xiv, 286 pp., illus. \$32. Springer Series in Social Psychology.

Active Galactic Nuclei. J. E. Dyson, Ed. Manchester University Press, Dover, N.H., 1985. xii, 383 pp., illus. Paper, \$26. From a conference, Manchester, England, 1984.

Adsorption Processes on Semiconductor and Dielectric Surfaces. I. V. F. Kiselev and O. V. Krylov. Springer-Verlag, New York, 1985. viii, 287 pp., illus. \$43.50. Springer Series in Chemical Physics, vol. 32. Translated from the Russian.

Advanced Weapons Systems. An Annotated Bibliography of the Cruise Missile, MX Missile, Laser and Space Weapons, and Stealth Technology. Brian Champion. Garland, New York, 1985. xii, 206 pp. \$35. Garland Reference Library of Social Science, vol. 285.

Advances in Hemostasis and Thrombosis. A. Ca-jozzo *et al.*, Eds. Plenum, New York, 1985. x, 334 pp., illus. \$55. Ettore Majorana International Science Series, Life Sciences, vol. 20. From a school, Erice, Italy, April 1983.

Advances on Oxygen Radicals and Radioprotectors. A. Breccia, C. L. Greenstock, and M. Tamba, Eds. Edizioni Scientifiche "Lo Scarabeo," Bologna, Italy, 1985. viii, 190 pp., illus. Paper, \$25. From a meeting.

AIDS. Etiology, Diagnosis, Treatment, and Prevention. Vincent T. DeVita, Jr., Samuel Hellman, and Steven A. Rosenberg, Eds. Lippincott, Philadelphia, 1985. xiv, 352 pp., illus. \$38.

The Wolves of Mount McKinley. Adolph Murie. University of Washington Press, Seattle, 1985. xx, 238 pp., illus. Paper, \$9.95. Reprint, 1944 edition.

Women's Folklore, Women's Culture. Rosen A. Jordan and Susan J. Kalcik, Eds. University of Pennsylvania Press, Philadelphia, 1985. xiv, 246 pp., illus. Paper, \$16.95. Publications of the American Folklore Society, New Series, vol. 8.



HEALTH PSYCHOLOGY A Psychobiological Perspective

by Michael Feuerstein,
Elise E. Labbe, and
Andrzej R. Kuczmierczyk

Based on the content of an undergraduate course in health psychology, this comprehensive textbook covers the foundations of the field, research methodologies, theoretical models, and intervention possibilities. Specific applications are shown in three problem areas—coronary heart disease, smoking, and pain—using principles and techniques presented in earlier sections.

0-306-42037-6/approx. 475 pp.
ill./1985/\$29.50

CHEMISTRY OF COAL CONVERSION

edited by Richard H. Schlosberg

A survey of the present scientific status of coal conversion chemistry. Experts from a variety of disciplines review current research into liquefaction, pyrolysis, gasification, hydrogen-transfer reactions, and the role of free radicals.

0-306-41974-2/331 pp. + index
ill./1985/\$52.50

FIBER OPTICS Technology and Applications

by Stewart D. Personick

Dr. Personick focuses on a user's perspective of basic fiber technology and a wide variety of applications, including telecommunications point-to-point digital trunks, data links, local area networks, wideband distribution networks, analog links and sensing systems. A volume in the series Applications of Communications Theory.

0-306-42079-1/270 pp. + index
ill./1985/\$45.00

text adoption price on orders of six or more copies: \$29.50



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Microbiologist. Seeks opportunity to provide results-oriented technical services for research, pharmaceutical, or biological products production. Sixteen years of experience in mass cell culture production, medical research, diagnostic virology, serology, electron microscopy; vaccine development; mammalian, insect, and microcarrier cell culture; laboratory design and safety; public speaking, technical writing, publications; equipment purchase and personnel and resource management. Experience in levels 2 and 3 biocontainment laboratories and has been vaccinated for eastern, western, and Venezuelan equine encephalitis, Rift Valley Fever, and rabies viruses. Bonnie King, 90 South Wadsworth Boulevard, Suite 105443, Lakewood, Colo. 80226. Telephone: 303-236-7950 or 744-9577. X

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Geologist. Bachelor of Science, Colorado State, August 1984. Seeking entry-level position: geologist assistant or geohydrologist assistant (attended Ohio University Groundwater and Hydrology Course). Knowledge of USGS equipment (groundwater, geophysical, survey). Active AAAS member since 1982. Will relocate/travel. Please inquire: Kevin Sheedy, 39 Barter, Hicksville, N.Y. 11801. 10/4, 11, 18, 25

Experienced Geologist-Hydrogeologist, additional biological dimension with publications, including book; mature, married, one young child; multilingual, Canadian, widely travelled, worked much abroad. Past positions: company/government. Experience of responsibility, field, office, laboratory, administrative, and supervisory. No objections to breaking new ground. Now occupied writing. Seeks employment. Reply to: Box 210, SCIENCE. X

Immunologist. Ph.D. 1970. Hybridoma/monoclonal antibody specialist. Extensive background in university and industrial research in cellular and molecular immunology. Supervisory experience. Excellent publications and references. Seeking position in academe or industry. Box 202, SCIENCE. 10/4, 11, 18

Polish M.D./Ph.D. Experience in coagulation and fibrinolysis. Seeks position in research. References and curriculum vitae available on request. Box 214, SCIENCE. X

Physiologist/Astrophysicist, better at being innovative than getting grants; seeks position to work on ion transport theory or optical measurements in biological systems. Box 215, SCIENCE. 10/4, 11, 18, 25

Sequenator Operator. Beckman/Applied-Biosystem models, GC, HPLC. Ten years of experience. Excellent work records. Box 301, SCIENCE. 10/4, 11

POSITIONS OPEN

ACADEMIC ORTHOPAEDIC SURGEON at the University of Michigan Medical Center with emphasis in **PEDIATRIC ORTHOPAEDICS**. Rank negotiable. Activities include participation in clinical and laboratory research programs in pediatric orthopaedics. Candidates should be Board-certified or -eligible in orthopaedic surgery, have demonstrated outstanding teaching and clinical skills, and have demonstrated interest in pediatric orthopaedics with clinical practice exclusively limited to pediatric orthopaedics. Fellowship training in pediatric orthopaedics is desirable. Send curriculum vitae and references to: **Robert N. Hensinger, M.D., Section of Orthopaedic Surgery, The University of Michigan Hospitals, C4138 Outpatient Building, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCN 145.

TEXAS—ADMINISTRATIVE POSITION—GRADUATE STUDIES AND RESEARCH. Assistant Dean for Graduate Studies and Research with faculty rank of associate professor or professor. Doctorate degree required; combined D.D.S./Ph.D. degrees preferred. Responsibilities include administration and coordination of advanced education programs in the biomedical sciences and dental specialties and promotion of faculty and student research. Established record in research and research funding required. Tenure, rank, and salary based on qualifications. Send curriculum vitae, along with names and addresses of three references, to: **Dr. T. W. Gage, Chairman, Search Committee for Assistant Dean, Baylor College of Dentistry, 3302 Gaston Avenue, Dallas, Texas 75246.** Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ACADEMIC NEUROSURGEON at the University of Michigan Medical Center with emphasis in pediatric neurosurgery. Activities include clinical care of neurosurgery patients with particular emphasis on the pediatric age group, medical student and resident teaching, and research with particular focus on nuclear magnetic imaging of the brain. Position is at the assistant professor level. Candidates should be fully trained neurosurgeons with Board-certification or -eligibility, have demonstrated skills as a clinical neurosurgeon, research interest and demonstrated research productivity, and strong interest in pediatric age group. Fellowship training in pediatric neurosurgery preferred. Direct inquiries to: **Julian T. Hoff, M.D., Professor and Head, Section of Neurosurgery, The University of Michigan Hospitals, C5083 Outpatient Building, Ann Arbor, Michigan 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCN 262.**

ACADEMIC PLASTIC SURGEON at the University of Michigan Medical Center. Position available in January 1986. Rank negotiable. Activities include teaching in a large plastic surgery residency program, managing a heavy patient load, and some administrative duties. Excellent, brand new hospital, clinic, and research facilities. Candidates should be Board-certified or -eligible in plastic and reconstructive surgery. Advanced training and clinical experience in hand or microvascular surgery as well as broad cosmetic experience, and an active interest in research are preferred. Send curriculum vitae, bibliography, and three letters of recommendation to: **Louis C. Argenta, M.D., Section of Plastic Surgery, The University of Michigan Hospitals, C7031 Outpatient Building, Ann Arbor, Michigan 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCN 263.**

ACADEMIC UROLOGIST at the University of Michigan Medical Center with emphasis in urologic oncology. Candidates should be Board-certified or -eligible in urology, have completed residency by time of appointment, have demonstrated skills as a clinical urologist, research experience and interest in an academic career. Position is at assistant professor level. Direct inquiries to: **Edward J. McGuire, M.D., Professor and Head, Section of Urology, Department of Surgery, The University of Michigan Hospitals, C5006 Outpatient Building, Box 003, Ann Arbor, Michigan 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCN 117.**

ANATOMICAL SCIENCES

We invite applications for two tenure-track positions at the assistant professor level, one to begin 1 July 1986 and the other, 1 September 1986. Applicants must possess a Ph.D. and/or M.D. degree and have completed at least 1 year of postdoctoral training. Teaching responsibilities could be in any of the anatomical sciences but priority will be given to those with expertise in embryology/histology or neuroanatomy. Preference will be given to applicants with active research programs in functional morphology or neurobiology although consideration will also be given to those with programs in other fields. Applicants are requested to submit curriculum vitae, statement of research interests and teaching experience, professional objectives, and names and addresses of three references to: **Search Committee, Department of Anatomical Sciences, State University of New York at Buffalo, Buffalo, New York 14214. Applications will be accepted to 1 December 1985. The State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR OF CHEMISTRY. Tenure-track faculty position in the Department of Chemistry at the University of Wisconsin-Parkside. Applicants must be committed to excellence in research and teaching and possess a doctoral degree in physical chemistry; subsequent postdoctoral experience is preferred. Teaching responsibilities will include physical chemistry laboratory and general chemistry. Research interests, theoretical or experimental, complementing those of the present faculty (for example, medicinal chemistry, X-ray crystallography, computer graphics-based molecular modeling, bio-organic chemistry, and radiation chemistry) would be especially attractive. Applications will be reviewed on 15 November 1985. Please submit curriculum vitae, including a description of future research plans, and arrange to have three letters of recommendation sent to: **Professor Bruce Branchini, Department of Chemistry, University of Wisconsin-Parkside, Box Number 2000, Kenosha, Wis. 53141. The University of Wisconsin-Parkside is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

ANALYTICAL CHEMIST. Thomas Jefferson University has a position available for an individual experienced with analytic methods in HPLC, GC, AA spectroscopy, UV/VIS spectroscopy and radioisotope (RIA) analysis. Expertise in the analysis of amino acids, electrolytes, gases, and perfluorocarbons desirable. This position offers the individual an opportunity to join a research team involved in an innovative approach to the treatment of stroke. B.S. or M.S. required. Salary commensurate with qualifications. Send résumé and cover letter to: **Dr. Anthony J. Triolo, Department of Pharmacology, THOMAS JEFFERSON UNIVERSITY, 1020 Locust Street, Philadelphia, Pa. 19107. An Equal Opportunity Employer.**

ANATOMY HEAD UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE

Nominations and applications are invited for the position of head of the Department of Anatomy, College of Medicine, The University of Arizona Health Sciences Center. The head will be responsible for continued development of ongoing research programs in cell biology, reproductive biology, endocrinology, and neurobiology, and will provide leadership in medical and graduate education programs. Candidates in all pertinent research areas will be considered, but demonstrated strength in cell or developmental biology is especially desired.

Applications and nominations should include complete curriculum vitae and bibliography, plus the names of at least three references. Nominations or applications will be accepted up to 15 November 1985 or until the position is filled. Address correspondence to:

**Thomas F. Burks, Ph.D., Chairman
Anatomy Head Search Committee
Department of Pharmacology
College of Medicine**

**The University of Arizona Health Sciences Center
Tucson, Arizona 85724**

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ANIMAL PHYSIOLOGIST. Assistant professor, tenure-track, beginning January 1986; teach two courses per semester with laboratory; animal physiology, comparative anatomy, human anatomy, a nonmajor course; supervise undergraduate research; advise. Ph.D. required. Seton Hill College is a Catholic liberal arts college for women, 35 miles east of Pittsburgh. By 18 October, send three letters of recommendation, statement of teaching and research goals, equipment needs, curriculum vitae, and transcripts to: **Sister Bernadette Fondy, Ph.D., Department of Biology, Seton Hill College, Greensburg, Pa. 16501. An Equal Opportunity/Affirmative Action Institution.**

ASSISTANT/ASSOCIATE PROFESSOR—ENVIRONMENTAL SCIENCES. Applications are invited for a tenure-track faculty position to begin 1 January 1986. The successful applicant will participate in the research and graduate educational programs of the Department of Environmental Health Sciences in the School of Public Health. Teaching duties include a graduate level course in environmental impact assessment. Candidates must have an appropriate Ph.D. and a strong research interest in terrestrial/wetlands ecology and/or groundwater quality. Submit curriculum vitae and the names and addresses of three references by 30 October 1985 to: **Dr. Geoffrey I. Scott, Chairman of Search Committee, Department of Environmental Health Sciences, Benson Room 306, University of South Carolina, Columbia, S.C. 29208. The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.**

ASSOCIATE PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology at Columbia University is interested in recruiting a faculty member with special interest and accomplishments in developmental pharmacology for appointment as associate professor. Expertise in cell culture, receptor biochemistry, and electrophysiology is also desirable. Those interested in being considered for this position should send a letter of interest and their curriculum vitae to:

**Brian F. Hoffman, M.D.
Chairman, Department of Pharmacology
College of Physicians and Surgeons
Columbia University
630 West 168 Street
New York, N.Y. 10032**

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POSITIONS OPEN

TWO ASSISTANT PROFESSORS—Applications are invited for tenure-track positions in the Department of Pharmacology at the State University of New York (SUNY)—Upstate Medical Center in the areas of: (i) neuroscience/neuroendocrinology, and (ii) cardiac research. One position is available immediately, the other 1 September. Applications and two letters of recommendation should be received by 15 November 1985. Send to: **Dr. Marcia Steinberg, Chair, Search Committee, Department of Pharmacology, SUNY—Upstate Medical Center, Syracuse, New York 13210. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR—BIOCHEMISTRY

The Department of Biochemistry at the University of Miami School of Medicine invites applications and nominations for a tenure-track position at the level of assistant professor. Candidates with interests in the application of molecular genetics and/or biophysical techniques to study membrane, protein or nucleic acid structure-function relationships are particularly encouraged to apply, although outstanding candidates in all areas of biochemistry and molecular biology will be given serious consideration. Responsibilities include development of a strong independent research program and participation in the teaching program. Applicants should submit curriculum vitae with a summary of present and future research interests, and request three letters of recommendation. Please ensure that all material is forwarded by 1 December 1985 to: **Dr. J. David Puett, Chairman of the Search Committee, Department of Biochemistry (R629), University of Miami School of Medicine, P.O. Box 016129, Miami, Fla. 33101.**

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ASSISTANT PROFESSOR OF BIOCHEMISTRY

A tenure-track position will be available in the Department of Biochemistry at Kansas State University in fall 1986. The successful applicant will have at least 2 years of postdoctoral experience. He or she will be expected to establish an independent research program and to participate in graduate and undergraduate teaching. Send résumé, a description of research plans, and the names of three references to: **David J. Cox, Head, Department of Biochemistry, Kansas State University, Manhattan, Kans. 66506. Application deadline: 15 November 1985. Kansas State University is an Equal Opportunity/Affirmative Action Employer.**

The Department of Chemistry of the University of Chicago invites applications from outstanding individuals for **ASSISTANT PROFESSOR** (tenure-track) faculty positions in physical and inorganic chemistry. Postdoctoral experience is preferred. Applicants should submit curriculum vitae, a list of publications, a succinct outline of their research plans, and should arrange for three letters of recommendation to be sent to: **Professor Leon M. Stock, Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, Illinois 60637. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT/ASSOCIATE PROFESSOR PHARMACOLOGY TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

The Department of Pharmacology of the Texas Tech University Health Sciences Center is seeking candidates for one, or possibly two, tenure-track positions at the assistant professor or associate professor rank. The first position is available 1 January 1986. Qualifications include the Ph.D. degree, preferably in pharmacology or a related biomedical science, with at least 2 years of postdoctoral training. Candidates will be expected to conduct an active, independent, and productive research program and to be persistent in seeking and obtaining research funding. Candidates for the associate professorship should have had several years of experience on a medical school faculty, have demonstrated a high level of competence with respect to the teaching of pharmacology, and have exhibited independence and productivity in research and research funding. Candidates with interests in cardiovascular, autonomic, endocrine, biochemical, amino acid metabolism, calcium or bone research will be given preference, but outstanding candidates with research expertise in other areas will be considered. Applications should include curriculum vitae and three names for reference purposes and should be sent prior to 21 October 1985 to: **Dr. Alexander D. Kenny, Chairman, Department of Pharmacology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430. An Equal Opportunity/Affirmative Action Employer.**

DIRECTOR

LABORATORY FOR CELL, MOLECULAR, and DEVELOPMENTAL BIOLOGY

The Department of Biological Sciences of the University of Illinois at Chicago seeks a **SENIOR MOLECULAR BIOLOGIST** for the position of director of the Laboratory for Cell, Molecular, and Developmental Biology. Candidates should have an exceptional record of research accomplishments, demonstrated organizational skills, and recognition as leaders in the field. Research speciality is open, but should be in an area central to modern molecular biology.

The Laboratory was established to strengthen and consolidate research and training programs in modern cellular, molecular, and developmental biology. It reflects a major campus commitment to foster excellence in the emerging areas of molecular biology and biotechnology. At present, 20 faculty members of the department participate in the research programs of the Laboratory. The Laboratory places strong emphasis on the maintenance of a productive research environment and on graduate and postdoctoral training. Permanent funding exists for support staff, for graduate fellowships, and for new equipment and facilities. The successful candidate will be expected to maintain an active and highly visible research group and to assume a leadership role in further growth and development of the laboratory and its programs, including the recruitment of new faculty members.

The successful candidate's academic appointment will be a tenured position as **professor** in the Department of Biological Sciences. Salary is negotiable. The position will be available 1 July 1986. Applications will be accepted until 1 February 1986 or until the position is filled. Nominations, or applications including curriculum vitae and the names of three references, should be sent to: **Dr. D. A. Morrison, Chair of the Search Committee for a Director, Department of Biological Sciences, University of Illinois at Chicago, Box 4348, Chicago, Ill. 60680; telephone: 312-996-6839. The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer.**

SENIOR STAFF ENVIRONMENTAL ENGINEER

KERR MCGEE CORPORATION, a leading natural resources company, seeks an Engineer with 5+ years experience in environmental regulatory matters relating to air pollution control. Responsibilities include ensuring Kerr McGee's compliance with federal, state, and local regulatory requirements under the Clean Air Act. EPA reference material source testing and continuous emission monitoring experience is required. An understanding of the application of air quality diffusion modeling and computer proficiency is preferred.

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The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR** (tenure-track). The person will be expected to establish a strong independent research program and to teach both medical and graduate students. The field of interest is open, although some preference may be given to candidates interested in structural biochemistry or molecular aspects of cell biology. Send résumé, summary of research interest, and three letters of reference by 1 November 1985 to: **Robert L. Hill, Department of Biochemistry, Duke University Medical Center, Durham, North Carolina 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT or ASSOCIATE PROFESSOR of MICROBIOLOGY—MOLECULAR GENETICIST

The Department of Microbiology, Loyola University Stritch School of Medicine, is inviting applications for the position of tenure-track assistant or associate professor in the area of molecular genetics-molecular biology. The candidate should have a strong background in eukaryotic, prokaryotic, or viral molecular genetics. An earned doctorate and postdoctoral research experience are required. The successful candidate will be expected to establish an independent research program, direct graduate students, and obtain outside support for research. Individuals applying at the associate professor level should show demonstrable success in these areas. The applicant will be encouraged to interact with an established group of molecular biologists. Teaching responsibilities include participation in a team taught microbiology course for medical students and presentation every other year of an advanced graduate level course in molecular and microbial genetics. The target date for filling the position is 1 July 1986. Salary will be commensurate with qualifications and experience. Send curriculum vitae, a brief description of research interests, and the names of three references to: **Chairman, Faculty Search Committee, Department of Microbiology, Stritch School of Medicine, Loyola University of Chicago, 2160 South First Avenue, Maywood, Ill. 60153, by 1 December 1985. Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR OF MOLECULAR BIOLOGY

The Department of Molecular Biology and Microbiology at Case Western Reserve University invites applications for a tenure-track faculty position. We are especially interested in well-qualified applicants in areas related to the molecular biology of gene expression and animal viruses. The appointment provides an excellent opportunity to develop a strong, independent research program in the growing research community at Case Western Reserve. Send curriculum vitae, a statement of research and teaching interests, and the names of four references to: **Dr. Fritz Rottman, Chairman, Department of Molecular Biology and Microbiology, Case Western Reserve University, Cleveland, Ohio 44106. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR POSITION IN PHYSIOLOGICAL PSYCHOLOGY to begin 1 July 1986; tenure-track. Teaching responsibilities are likely to include: introductory psychology, upperdivision physiological psychology, a specialty course at the undergraduate level, and a graduate seminar. A doctorate and a strong research record are required; postdoctoral training is desirable. Send curriculum vitae, brief description of research interests, and names and addresses of three references to: **Search Committee, Department of Psychology, University of California, Davis (UCD), Calif. 95616. Applications must be postmarked on or before 30 November 1985. UCD is an Equal Opportunity/Affirmative Action Employer.**

ASSOCIATE PROFESSOR OF PHARMACOLOGY, 1 January 1986 or later. The department has a tenure-track opening for an individual with an active research program in neuropsychopharmacology. We offer a competitive salary, start-up funds, laboratory space, and the opportunity to collaborate with four other researchers in this area. Duties include teaching medical and graduate students, conducting research, and serving on College of Medicine committees. Candidates should have a Ph.D. in pharmacology, a strong research program indicated by a record of peer-reviewed grants and research publications, and evidence of excellence in teaching. Send complete curriculum vitae, including a brief statement of research interest and the names of individuals who may be contacted as references, to: **Office of the Provost, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ASSOCIATE DIRECTOR OF TOXIC SUBSTANCES RESEARCH AND TEACHING PROGRAM AT THE UNIVERSITY OF CALIFORNIA, DAVIS. Applications and nominations are invited for the position of associate director, University of California Toxic Substances Research and Teaching Program. An individual is sought to help in the administration of this new program currently being developed throughout the University system. The successful candidate will be based on the Davis campus; responsibilities will include representing the program in its interactions with state agencies and the public sector plus development of an independent research program in a field relevant to toxic substances. Preference will be given to persons whose research incorporates elements of risk assessment, or who are willing to develop such a research focus. The level of the position is open but intended to attract an independent investigator whose research record would justify appointment at the associate/full professor level at the University of California. The associate director will hold an 11-month appointment at 100 percent time. Résumés and applications should contain a statement of career goals and be directed to: **Dr. James Overstreet, Chair, Search Committee for Toxic Substances Research and Teaching Program, c/o Laboratory of Energy-Related Health Research, University of California, Davis, Calif. 95616. Position open until filled but to assure consideration applications should be received by 30 November 1985. The University of California is an Equal Opportunity/Affirmative Action Employer.**

ATHEROSCLEROSIS RESEARCH

The Cardiovascular Research Center, associated with a major hospital, is seeking nationally recognized research scientists in the fields of cell biology and pharmacology. The **CELL BIOLOGIST** must have a strong background in tissue culture of vascular cells and an interest in cellular lipid metabolism or action of growth factors. The **PHARMACOLOGIST** must have a background in mechanisms of leukocyte activation or vascular cell metabolism, particularly as related to the initial etiology and development of atherosclerosis. The scientists would participate in a multidisciplinary approach to the early detection and prevention of atherosclerotic vascular changes. Applicants must hold a Ph.D. and/or M.D. degree. Salary commensurate with qualifications. Please send a statement of research interests and complete curriculum vitae to: **Box 208, SCIENCE**

BEHAVIORAL BIOLOGIST

The Department of Zoology, University of Maryland, is seeking outstanding candidates for a tenure-track position in animal behavior. Preference will be for candidates having a demonstrated interest in the evolution of behavior. Rank open. Application deadline: 15 January 1986. Send curriculum vitae, research plans, reprints, and three letters of recommendation to: **Behavioral Biologist Search Committee, Department of Zoology, University of Maryland, College Park, Md. 20742.**

An Affirmative Action/Equal Opportunity Employer

BIOCHEMIST with Ph.D. degree needed for position in the Department of Pediatrics at the University of Illinois at Chicago. We are seeking a well-trained individual with 3 to 5 years of experience in steroid hormone receptors, and tissue and embryo culture. Please contact: **George R. Honing, M.D., Ph.D., University of Illinois at Chicago, Department of Pediatrics, 840 South Wood Street, Chicago, Illinois 60612. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

CANCER RESEARCH SCIENTISTS AND TECHNICIANS

Senior and entry level scientific and technical positions available at our Nashville and Memphis laboratories.

Monoclonal Antibody Section—Generation, screening, and cloning of hybridomas; production, purification, and characterization of MoAbs.

Biochemistry Section—Characterization of antibodies and cytokines including column chromatography, HPLC, electrophoresis and conjugation of antibodies to drugs, toxins and isotopes.

Lymphokine Section—Cellular cytotoxicity against tumor cells; purification and evaluation of lymphocyte subsets and lymphokine responsiveness; cryopreservation of functionally active cells; clonogenic assay.

Send curriculum vitae/résumé to: **Robert K. Oldham, M.D., Biotherapeutics, Inc., Riverside Drive, Franklin, Tenn. 37064.**

POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITIONS

Additional tenure-track positions in biochemistry are available and interested candidates not responding to our previous ad are invited to apply. Candidates should have several years of postdoctoral experience. They will be expected to carry out an independent research program and participate in the teaching of biochemistry to graduate and professional students. Candidates with research interests in cellular biochemistry and metabolism, membranes and receptors, neurochemistry, or eukaryotic molecular biology are encouraged to apply; however, candidates will be considered in all areas. Any interested person should submit a copy of his or her curriculum vitae, research plans, reprints or preprints of his or her three most significant publications, and two letters of reference to:

John N. Fain, Ph.D.
Professor and Chairman
Department of Biochemistry
University of Tennessee
Center for the Health Sciences
800 Madison Avenue
Memphis, Tenn. 38163
Attention: Cheryl M. Colson

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

BIOENGINEERING FACULTY POSITIONS. The Center for Bioengineering at the University of Washington invites applications for tenure-track openings at the assistant/associate professor level. Particular areas of interest include bioinstrumentation, biomaterials, biomedical optics, and biotechnology. Applicants should have an earned doctorate. Send curriculum vitae, recent publications, and the names of three or more references by 1 November 1985 to: **Dr. Lee L. Huntsman, Director, Center for Bioengineering WD-12, University of Washington, Seattle, Wash. 98195.** *Affirmative Action/Equal Opportunity Employer.*

CELL BIOLOGY, MOLECULAR BIOLOGY, BIOCHEMISTRY OF THE RETINAL PIGMENT EPITHELIUM OR RETINA. Position available for Ph.D. or M.D. with basic research experience in cellular level function of the retinal pigment epithelium or retina. This position will complement current departmental clinical research programs in retinal/vitreous subspecialties and basic research programs in photoreceptor biophysics and psychophysics. Send curriculum vitae and names of three references to: **Dr. M. W. Kaplan, Chairman, Retinal Function Search Committee, Oregon Lions Sight and Hearing Institute, Department of Ophthalmology, Good Samaritan Hospital & Medical Center, Portland, Oregon 97210.** *Good Samaritan Hospital & Medical Center is an Equal Opportunity Employer.*

IMPERIAL CANCER RESEARCH FUND Cell Biologist

There is a vacancy for a scientist within the broad discipline of cell biology in the Fund's laboratories at Lincoln's Inn Fields. This is a 5-year appointment with the possibility of transfer to the permanent staff. Applicants of senior postdoctoral status will be expected to propose an independent research program within the above discipline. Salary range: £13,040 to £16,290. For further information, write or telephone: **Ms. S. M. Hurley, Imperial Cancer Research Fund, Lincoln's Inn Fields, London, WC2A 3PX England;** telephone: 01-242 0200, extension 305. Please quote Reference 122/85.

CELL AND MOLECULAR BIOLOGIST

The Zoology Department at the University of California, Davis, invites applications for a full-time (11 months per year), tenure-track position at the assistant professor level. Applicants must have a Ph.D. and a minimum of 2 years of postdoctoral experience. The department is interested in applicants who are studying the molecular aspects of cellular differentiation and gene expression in eukaryotes. Suitable problems include, but are not limited to, genetic regulation of development and molecular biology of cellular differentiation, for example in the immune system, the nervous system, or in hematopoiesis or muscle. The principal teaching duties will be an undergraduate cell or developmental biology course and a graduate course in the candidate's area of interest. Applicants should forward their curriculum vitae with selected reprints and have three letters of recommendation sent by 1 December 1985 to: **Dr. Richard Nuccitelli, Chair, Search Committee, Department of Zoology, University of California, Davis, Calif. 95616.**

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

POSITIONS OPEN

BIOLOGIST

The Hope College, Biology Department, will have a tenure-track position available beginning August 1986. Applicants must have a strong interest in undergraduate liberal arts education. The research area for this position is open, but the successful candidate must be able to teach comparative vertebrate anatomy. He/she will also teach in the introductory biology course and an appropriate upper level course. In addition he/she will be expected to seek extramural funding to support an active research program which will involve undergraduate students. Appointment is expected to be at the assistant professor level. Preference will be given to candidates with postdoctoral experience.

Hope College is a distinguished Christian liberal arts college with an enrollment of approximately 2500 and a faculty of more than 140. The College is affiliated with the Reformed Church in America. Hope has maintained a strong tradition in science that involves both teaching and research. Each year a number of students present papers at state or national meetings and coauthor publications.

Qualified applicants should arrange to have curriculum vitae, transcripts, a statement of teaching competencies, an outline of proposed research, and three letters of recommendation forwarded as soon as possible to:

Dr. Paul Van Faasen, Chairman
Department of Biology
Hope College
Holland, Mich. 49423

Deadline for applications is 1 December 1985.

Hope College is an Equal Opportunity Employer.

CELL BIOLOGIST/MOLECULAR BIOLOGIST

The Department of Biology at the University of Rochester invites applications for two tenure-track positions at the level of assistant professor. One appointment will be in the area of molecular biology and the other one will be in cell biology. Candidates should have shown excellence in research, and 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, New York 14627

Closing date for applications is 31 December 1985. *The University of Rochester is an Affirmative Action/Equal Opportunity Education Institution, M/F.*

CHEMICAL MEASUREMENT

The University of Maryland seeks candidates for a tenure-track position in the Department of Chemistry who are interested in developing an outstanding research program in the creation of state-of-the-art techniques of chemical measurement. Areas of particular interest include advanced mass spectroscopy, applications of lasers and nonlinear optics, ultramicroinstrumentation, biomedical analysis, in vivo monitoring, electrochemistry, remote sensing, chemometrics, and process analysis. Send a résumé, research plan, and three letters of reference to: **T. C. O'Haver, Department of Chemistry, University of Maryland, College Park, Md. 20742.** *An Affirmative Action/Equal Opportunity Employer.*

THE DEPARTMENT OF CHEMISTRY of the newly formed School of Chemical Sciences at the University of Georgia invites applications for **three tenure-track positions** (academic year) at any level beginning 1 September 1986. The area of research is open, but applicants should have a solid record of accomplishment in chemical research with a biological orientation, have at least 2 years of postdoctoral experience or equivalent training, and be committed to the development of a vigorous, independent program of scholarly research which can compete for federal grant support. A strong interest in and aptitude for teaching both undergraduate and graduate courses in analytical, inorganic, organic, or physical chemistry should also be demonstrated. Send curriculum vitae, a summary of research plans, and the names of three or more references by 15 November 1985 to:

Dr. Harry D. Peck, Jr.
Director, School of Chemical Sciences
Chemistry Building
University of Georgia
Athens, Ga. 30602

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

DEAN OF THE COLLEGE OF SCIENCE AND MATHEMATICS NORTH DAKOTA STATE UNIVERSITY

North Dakota State University, Fargo, North Dakota, invites nominations and applications for the position of dean of the College of Science and Mathematics. The dean may assume duties as early as 1 April 1986, or as soon thereafter as possible. Minimum qualifications are an earned doctorate, teaching and research experience which qualify the candidate for a position as professor in one of the College's disciplines (biochemistry, botany, chemistry, computer science, geology, mathematics, physics, polymers and coatings, psychology, statistics, and zoology), demonstrated leadership skills and experience in academic administration, and the ability to interact effectively with other members of the university community. Additional desirable qualifications are experience in budget preparation and management, demonstrated success in obtaining research grant support, knowledge of contemporary faculty and university concerns, and experience in thesis advising at the doctoral level. Nominations will be accepted until 11 October 1985. Completed applications, including curriculum vitae and the names, addresses, and telephone numbers of at least three references, should be sent by 1 November 1985 to: **Dr. Margriet Lacy, Chair, Science and Mathematics Dean Search Committee, Office of the Vice President for Academic Affairs, P.O. Box 5014, State University Station, Fargo, North Dakota 58105.** Inquiries by telephone may be directed to: **Dr. Lacy at 701-237-8847.**

North Dakota State University is an Equal Opportunity Institution.

DIRECTOR OF THE NEW YORK SEA GRANT INSTITUTE

State University of New York and Cornell University invites applications/nominations for Director, New York Sea Grant Institute, Albany, NY, a cooperative endeavor of both universities.

Responsibilities: provide leadership in conception, planning, development and conduct of research, education, training and extension activities of Institute; responsible to Board of Governors; supervise small administrative staff; oversee annual budget of \$3,000,000+; develop priorities and directions for Institute-sponsored studies in close coordination with faculty from New York's universities; with staff, monitor, review and evaluate research program. Develop/coordinate educational resources of Institute, in close coordination with Cornell Cooperative Extension, to serve needs of coastal clientele. Administer special Institute programs (Sea Grant Scholars, Post-Doctoral program and Professorships); represent Institute at national, regional and state meetings; provide liaison to federal and state agencies and legislatures; provide leadership for dissemination of scientific and technical information to public and private bodies.

Qualifications: Demonstrated experience in and ability to: provide leadership of marine-related scientific, technical and educational efforts; function effectively in multi-campus setting; communicate effectively with diverse audiences. Knowledge of Sea Grant program. Appropriate graduate degree and ability to travel required.

Salary and Fringe Benefits: Competitive, commensurate with experience and qualifications. Excellent fringe benefits available.

Send nominations and applications including resume with covering letter to: **Dr. Donald Behrend, Chair, Board of Governors, New York Sea Grant Institute, 37 Elk Street, Albany, NY 12246.** Attn: Ms. Laura McKay, Assistant Director.

Review of applications begins 10/85. Completed by 12/15/85. Position open as early as 1/1/86. An Equal Opportunity/Affirmative Action Employer.

HELP US TO ADVANCE THE FRONTIERS OF SCIENCE

Amersham Corporation has openings for creative forward-thinking scientists with a minimum of one year of post doctoral experience. In this challenging assignment you will be responsible for ensuring that Amersham Corporation continues to meet the technological needs of the U.S. research market. The ideal candidate will possess broad experience in biochemistry combined with an expert knowledge of immunology or neurobiology. They will also be fluent communicators and shrewd interpreters of new developments in science.

We will offer you an excellent starting salary, an attractive benefits package including dental insurance and 401K savings plan, and a highly professional working environment. Amersham Corporation is located in an attractive northwest suburb of Chicago, fourteen minutes from downtown. Send your resume including your salary requirements in confidence to:

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Forestry and Environmental
Studies, Duke University,
Durham, NC 27706,
(919) 684-2135

POSITIONS OPEN

CHAIRPERSON, BIOLOGY DEPARTMENT. Baylor University invites applications for chairperson of the Department of Biology. Applicants should hold the Ph.D. or equivalent degree and have experience in teaching, research, and administration. The department has 16 faculty members, 20 graduate students, and over 500 biology majors. Send letter of application, résumé, and three letters of recommendation to: **Dr. Julian F. Watkins, Search Committee Chairman, Department of Biology, Baylor University, Waco, Texas 76798.** Applications will be accepted until the position is filled. *Baylor University is an Equal Opportunity Employer and is owned and operated by the Baptist General Convention of Texas.*

DEPARTMENT CHAIR, DEPARTMENT OF CHEMISTRY, TUFTS UNIVERSITY

Tufts University invites applications and nominations for the position of department chair, to begin 1 September 1986. Ph.D. required. Candidates must have established a distinguished record of research and teaching, in any field of chemistry, and have demonstrated evidence of leadership ability. The position requires a strong commitment to the continuing development of departmental research and academic programs and of its faculty and resources. Expansion of the department's faculty and facilities is a high priority of the University. *Applications from members of minority groups and women are encouraged.* Applicants should submit curriculum vitae and have three letters of recommendation forwarded to: **Search Committee, Department of Chemistry, Tufts University, Medford, Mass. 02155.** Evaluation of applicants will begin 15 November 1985. *An Equal Opportunity/Affirmative Action Employer.*

The San Francisco Veterans Administration Medical Center (SFVAMC) seeks a **CHIEF** of the Anatomical Pathology Service with a joint appointment at the associate professor or professor of pathology level at the University of California, San Francisco. Board-certification or -eligibility in anatomical pathology required. Demonstrated successful administrative, clinical, teaching, and research (preferably immunopathology) experience. Send curriculum vitae to: **Dr. Marvin H. Sleisenger, Medical Service (111), SFVAMC, 4150 Clement Street, San Francisco, Calif. 94121.** *Affirmative Action/Equal Opportunity Employer.*

CLINICAL BIOCHEMICAL GENETICIST. The Department of Genetics is seeking a Ph.D. who is Board-eligible/certified (American Board of Medical Genetics) to head its Biochemical Genetics Laboratory. Candidates with enzymology and recombinant DNA techniques background preferred. Send résumé, relevant reprints, and three letters of reference to: **Dr. Raj Bharathur, Department of Genetics, Roche Biomedical Laboratories, 1 Roche Drive, Box 500, Raritan, N.J. 08869.** *An Affirmative Action/Equal Opportunity Employer.*

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM DEAN OF THE SCHOOL OF OPTOMETRY

The University of Alabama at Birmingham (UAB) is seeking applications and nominations for the position of dean of the School of Optometry. The dean is the chief administrative officer of the School of Optometry and is responsible to the Senior Vice President for Health Affairs for the administration of all educational and research programs conducted by the School of Optometry.

The School of Optometry is one of six health professional schools in the UAB Medical Center (the others are Medicine, Dentistry, Nursing, Public Health, and Community and Allied Health). The Medical Center schools are closely related through cooperative programs and collaborative research. Programs offered by the School of Optometry include the professional curriculum in optometry, graduate programs (M.S. and Ph.D.) in physiological optics, optometric residency training, continuing education for practicing optometrists, and basic and applied vision research. The research activities are supported in part by a Vision Research Center Grant from the National Eye Institute.

Applications and nominations should include curriculum vitae, the names of three references, and any other supporting material deemed appropriate. To be assured of full consideration, these should be submitted by 31 December 1985 to: **Dr. Joseph F. Volker, Chairman, School of Optometry Dean Search Committee, The University of Alabama at Birmingham, Box 85 SDB, University Station, Birmingham, Ala. 35294.** *UAB is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

From time to time, positions are available in the Department of Anesthesiology, Yale University School of Medicine, at the **CLINICAL AND RESEARCH FACULTY** level. Interested individuals should apply to:

Paul G. Barash, M.D.
Chairman, Department of Anesthesiology
Yale University School of Medicine
333 Cedar Street
New Haven, Conn. 06510

Please respond by 1 January 1986.

Equal Opportunity/Affirmative Action Employer. Qualified women, minority group members, and handicapped individuals are encouraged to apply.

DIRECTOR, GRADUATE PROGRAM IN CLINICAL PSYCHOLOGY

The Department of Psychiatry at the University of California, San Diego, School of Medicine, is seeking faculty candidates for the directorship of a new Ph.D. program in clinical psychology. Candidates should have career and teaching achievements and accomplishments sufficient to qualify for an appointment as a senior professor in the University of California. Strong emphasis will be placed on previous scholarly research record. Priority will be given to eminent scholars who have an established international reputation in a research area which has clinical relevance. The director of the clinical Ph.D. program must be a licensed clinical psychologist and eligible for licensing in the state of California. Demonstrated administrative experience in developing and directing research and/or clinical training programs is very desirable.

Salary related to academic rank and step within the established salary schedule of the University of California, San Diego.

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

Send curriculum vitae by 15 November 1985 to:

Lewis L. Judd, M.D.
Professor and Chairman
Department of Psychiatry (M-003)
Attention: Search Committee C
University of California, San Diego
La Jolla, California 92093

DIRECTOR, DIVISION OF ORTHODONTICS. Columbia University School of Dental and Oral Surgery invites applications for a full-time faculty position available 1 September 1986. Responsibilities include administration of predoctoral and postdoctoral teaching; conduct and development of research program. Evidence of scholarly accomplishments and demonstration of leadership in the field preferred. Opportunity available for intramural practice. Academic rank and salary commensurate with background and experience. Interested individuals should submit curriculum vitae to: **Professor Irwin D. Mandel, Chairman, Orthodontics Search Committee, School of Dental and Oral Surgery, Columbia University, 630 West 168 Street, New York, New York 10032.** *We take Affirmative Action toward Equal Opportunity.*

FACULTY POSITION IN PATHOLOGY

The Department of Pathology at the University of Virginia School of Medicine has an opening at the assistant or associate professor level for an academic pathologist with a strong background in an area of modern experimental pathology such as molecular biology or membrane biology. It would be an advantage for the candidate to have clinical training in blood banking, hematology, or immunology. The successful candidate will have demonstrated the ability to develop an independently funded research program. Send curriculum vitae plus names and addresses of three references to: **Thomas W. Tillack, M.D., Chairman, Department of Pathology, Box 214, University of Virginia Medical Center, Charlottesville, Va. 22908.** *An Equal Opportunity/Affirmative Action Employer.*

HEMOGLOBIN GENETICIST for a research position in the Sickle Cell Center Research Laboratory in the Department of Pediatrics. Some postgraduate level teaching. Faculty appointment at the assistant professor or associate professor level. Requirements include Ph.D. degree in genetics or biochemistry and a minimum of 3 years of experience in hemoglobin research, with a substantial background in globin gene DNA analysis and/or globin structural analysis. Contact: **George R. Honig, M.D., Ph.D., Professor and Head, Department of Pediatrics, University of Illinois, 840 South Wood Street, Chicago, Ill. 60612.** *The University of Illinois at Chicago is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR OF THE WAMI MEDICAL PROGRAM IN IDAHO

The University of Idaho solicits nominations and applications for the position of director for Idaho's component of the WAMI (Washington, Alaska, Montana, Idaho) Regional Medical Education Program of the University of Washington School of Medicine. Position descriptions are available on requests made to the address below. Starting date is 1 July 1986. To apply, please submit a letter of application, a résumé, and the names, addresses, and telephone numbers of four references by 1 November 1985 to: Chair, WAMI Search Committee, College of Letters and Science, University of Idaho, Moscow, Idaho 83843.

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

DIRECTOR OF LABORATORY ANIMAL RESOURCES, ASSISTANT/ASSOCIATE PROFESSOR. The Southern Illinois University School of Medicine invites applications for the position of director of Laboratory Animal Resources. Candidates are required to have a D.V.M. Desirable qualifications include: American College of Laboratory Animal Medicine Board-eligibility or -certification; 3 years of experience in laboratory animal facility management. Salary is commensurate with experience. Interested individuals should submit a letter describing their interest in and qualifications for the position along with current curriculum vitae and three references. Please submit to: William T. Kabisch, Ph.D., Associate Dean for Research, Southern Illinois University School of Medicine, P.O. Box 3926, Springfield, Illinois 62708. Applications will be accepted until 1 January 1986 or until position is filled. *Southern Illinois University School of Medicine is an Equal Opportunity/Affirmative Action Employer.*

ELECTROPHYSIOLOGIST—NEUROSCIENTIST experienced in *in vivo* and *in vitro* techniques (intracellular) in mammalian CNS for studies on neurobiology and pharmacology of brainstem autonomic neurons. Postdoctoral/research associate/junior staff level. Contact: Dr. Donald Reis, Laboratory of Neurobiology, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021. *Cornell is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN MICROBIOLOGY/IMMUNOLOGY/VIROLOGY. The Department of Cell and Molecular Biology invites applicants for a tenure-track position at the senior faculty level. Salary is on a 12-month basis; it is competitive and commensurate with experience. Applicants must have a strong interest in graduate education and have demonstrated research ability through publications and current grant support. The appointee will be expected to contribute to advanced graduate teaching and instruction for medical students. The department comprises 35 faculty members and offers Ph.D. degrees in biochemistry and microbiology. The department is housed in modern spacious facilities and is well equipped. Interested applicants should send curriculum vitae, including representative reprints, a brief statement of anticipated research, and names and addresses of three references, to: Dr. George H. Brownell, Chairman, Faculty Search Committee, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912. *Equal Opportunity Employer/Affirmative Action Program. J3227.*

FACULTY POSITION IN MICROBIOLOGY/IMMUNOLOGY/VIROLOGY. The Department of Cell and Molecular Biology invites applicants for a tenure-track position at the junior faculty level. Salary is on a 12-month basis; it is competitive and commensurate with experience. Applicants must have a strong interest in graduate education and have demonstrated research ability through publications and current grant support. The appointee will be expected to contribute to advanced graduate teaching and instruction for medical students. The department comprises 35 faculty members and offers Ph.D. degrees in biochemistry and microbiology. The department is housed in modern spacious facilities and is well equipped. Interested applicants should send curriculum vitae, including representative reprints, a brief statement of anticipated research, and names and addresses of three references, to: Dr. George H. Brownell, Chairman, Faculty Search Committee, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912. *Equal Opportunity Employer/Affirmative Action Program. J3227.*

POSITIONS OPEN

FACULTY MEMBER in Obstetrics and Gynecology Department, with Ph.D. degree in biochemistry, embryology, physiology, or related field, to supervise *in vitro* fertilization and andrology laboratory. A minimum of 1 year of postdoctoral experience with expertise in *in vitro* fertilization preferred. Must be willing to carry out collaborative research with fellows and other faculty in the Division of Reproductive Endocrinology. Salary and rank are open. *Women and minorities are encouraged to apply and identify themselves.* Reply to:

Luther M. Talbert, M.D.
Department of Obstetrics & Gynecology
4012 Old Clinic Bldg. (226H)
University of North Carolina
Chapel Hill, N.C. 27514

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

The Department of Veterinary Biomedical Sciences, College of Veterinary Medicine, University of Missouri-Columbia, is accepting applications for two tenure-track **FACULTY POSITIONS**. Qualifications include D.V.M. and/or Ph.D.; evidence of teaching skills; and ability to develop a strong biomedical research program in some aspect of mammalian pharmacology and/or physiology, whether at the molecular, membrane, cellular, or systemic level. One position (instructor-assistant professor level), jointly sponsored by the Dalton Research Center, is oriented toward cardiovascular control mechanisms. One position (assistant professor-associate professor level; D.V.M., Ph.D. preferred) requires an established research program and ability to direct professional/graduate level courses in veterinary pharmacology.

Applications should include curriculum vitae, names of three references, and a letter stating professional goals. Send correspondence to: H. Richard Adams, Department of Biomedical Sciences, College of Veterinary Medicine, University of Missouri-Columbia, Mo. 65211.

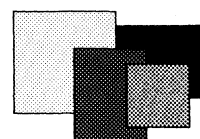
Department of Biology seeks a broadly trained **GENETICIST** whose research is concerned with basic problems in genetics to fill a tenure-track assistant professor position no later than fall 1986. Candidate should have at least 1 year of postdoctoral experience and must show evidence of continued research productivity. Duties will include undergraduate and graduate teaching in genetics and the establishment of a vigorous research program including the supervision of M.S. and Ph.D. students. Submit curriculum vitae, reprints of recent publications, and a statement of research goals and teaching interests. Also arrange to have three letters of recommendation forwarded by 1 November 1985 to: Dr. F. Paul Doerder, Genetics Search Committee, Department of Biology, CLEVELAND STATE UNIVERSITY, 1983 East 24 Street, Cleveland, Ohio 44115. *An Equal Opportunity Employer, M/F/H.*

INSECT-PLANT INTERACTIONS SPECIALIST (reopened)

Tenure-Track Position—12-Month Basis

Ph.D. in entomology, biochemistry, or related field required. Candidate should have interest and capability for developing a vigorous research program on the physiology and biochemistry of insect-plant interactions. Collaboration with entomologists and plant breeding specialists is expected. Teaching responsibilities (5 to 10 percent) will involve development of a course compatible with appointee's interests and needs of the department. Salary will be commensurate with training and experience. Application deadline is 15 November 1985. Send detailed curriculum vitae, transcripts, list of publications with selected reprints, Ph.D. thesis summary, three letters of recommendation, and statement of research and teaching interests to: Dr. Larry A. Crowder, Head, Department of Entomology, 501 Life Sciences West, Oklahoma State University, Stillwater, Okla. 74078. *An Equal Opportunity/Affirmative Action Employer.*

INSECT SYSTEMATIST. Assistant professor (non-tenure track) with responsibilities for teaching and research. Responsibilities include teaching of courses in general entomology and systematics (exceptional instructional capabilities required), and research in the area of insect systematics with emphasis on taxonomic group(s) of major economic importance. Deadline for receipt of applications is 1 November 1985. For complete details, contact: P. B. McEvoy, Chairman, Search Committee, Department of Entomology, Oregon State University (OSU), Corvallis, Ore. 97331. *OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*



More Than A
Step Ahead

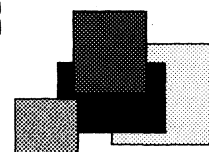
Research Scientist Wound Healing

A move to Collagen Corporation is more than a step forward in your career. It's a step into the future of biotechnology. With the successful research, production and marketing of Zyderm®I and Zyderm®II Collagen Implant, we are now leading the way to new applications in the areas of dermatology, plastic surgery, podiatry, dentistry, otolaryngology and orthopedics. If you're looking for a progressive, high-energy environment where creativity counts, join the innovators — at Collagen Corporation.

We are currently recruiting for a Research Scientist (PhD plus a minimum of 1-3 years' experience) in the area of wound healing research. As a member of our dermal wound repair research team, this individual will be heavily involved in using *in vitro* and *in vivo* models to evaluate the role of growth factors in the wound repair process. This position requires postdoctoral experience in growth factor biochemistry and/or cell biology.

Collagen Corporation offers excellent growth potential and attractive salaries and benefits. To apply, please send your resume to D. Webster, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.

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Corporation



POSITIONS OPEN

HEAD of DEPARTMENT

The Department of Civil Engineering at Carnegie-Mellon University is seeking applicants for the position of professor and head of the department. Candidates must have a distinguished record of research and scholarly achievement compatible with one or more areas of concentrations of the department. The primary concentration areas are: engineering planning and management, environmental engineering; mechanics, structural, and geotechnical engineering; and computer-aided engineering including robotics. The department is comprised of 18 faculty members, several of whom hold joint appointments, nine research associates, 63 full-time graduate students, and approximately 90 undergraduates. The department has a vigorous externally funded research program. The head is expected to be dedicated to excellence and to provide leadership to maintain and evolve programs in teaching and research. Applications should be received by 31 October and should be sent to: **Professor Richard G. Luthy, Head of Search Committee, Department of Civil Engineering, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213.** Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minority groups.

HEAD, DEPARTMENT OF CHEMISTRY. Drexel University invites applications and nominations for the position. Candidates must have earned a doctorate and have established a distinguished record of research, teaching, and other professional accomplishments. The successful individual must demonstrate a commitment to the continuing development of research and academic programs, of faculty and departmental resources. The post will be available on 1 September 1986. Applications and nominations should be submitted with résumés and the names of three referees by 15 November 1985. Materials should be sent to the chairman of the Search Committee: **Professor J. P. Friend, Department of Chemistry, Drexel University, Philadelphia, Pennsylvania 19104.** Drexel University is an Equal Opportunity/Affirmative Action Employer and welcomes applications from women and minority persons.

INSECT MOLECULAR BIOLOGIST

The Department of Entomology, University of Illinois at Urbana-Champaign, is seeking an assistant professor (tenure track), whose major interests are in insect biology and whose research program involves recombinant DNA technology. The position is open to any individual with a Ph.D. degree, and preferably some postdoctoral experience, who is doing basic research on insects, or on arthropods of medical importance. Teaching responsibilities will include insect genetics and general biology. Salary range is competitive.

Starting date is August 1986. To receive full consideration, applications must be received by 15 November 1985. Send curriculum vitae, reprints, statement of research plans, and names of three references to:

Dr. J. H. Willis
Chair, Search Committee
Department of Entomology
320 Morrill Hall
University of Illinois
505 South Goodwin Avenue
Urbana, Illinois 61801
Telephone: 217-333-2910

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

MAMMALOGIST

Curator of mammalogy and head of Department of Mammalogy. Appointment will be at the senior associate curator or full curator level. Ph.D. with curatorial and research experience in mammalian systematics: familiarity with administrative duties. Curatorial duties in a world mammal collection, systematic research, gallery development, and a 3-year commitment to administration for a staff of 10; possibility of a university teaching cross appointment. Salary commensurate with qualifications and experience. This is a tenure-stream, permanent position. Appointment begins as soon as possible. Curriculum vitae, research plans, reprints of publications, and letters from three references should be sent to: **Dr. Judith L. Eger, Chairwoman, Search Committee, Department of Mammalogy, Royal Ontario Museum, Toronto, Ontario, CANADA M5S 2C6,** by 15 November 1985. Applications are invited from all qualified candidates. In accordance with Canadian immigration requirements, applications from Canadian citizens and permanent residents will be considered first.

POSITIONS OPEN

IMMUNOLOGIST. The Department of Veterinary Parasitology, Microbiology and Public Health, College of Veterinary Medicine, Oklahoma State University, invites applications for a position of immunologist. Requirements are a D.V.M. and/or a Ph.D.; Board-certification is preferred for D.V.M.'s. Responsibilities include development of a strong research program in brucellosis involving the molecular/cellular aspects of the host defense mechanisms (humoral and/or cell-mediated immunity) to subunit antigens of *B. abortus*. Experience in one or more of the areas of recombinant DNA, monoclonal antibody, immunogenetics, or immunochemistry is desirable. The position is supported by both the Agricultural Experiment Station and the College of Veterinary Medicine. The program includes cooperative interaction with faculty in various disciplines. The person must interact with other scientists involved with brucellosis research at the national and international levels. The person will advise graduate students and help to develop a graduate course in immunology. Salary and rank commensurate with qualifications and experience. Send application, including curriculum vitae, statement of professional goals, and names of three references, to: **Dr. R. W. Fulton, Department of Veterinary Parasitology, Microbiology and Public Health, Oklahoma State University, Stillwater, Okla. 74078; 405-624-6737.** Applications must be received by 1 December 1985 to ensure full consideration.

An Equal Opportunity/Affirmative Action Employer that encourages applications from members of minority groups.

The Department of Comparative Medicine, Tufts University School of Veterinary Medicine, is recruiting an **INSTRUCTOR OR ASSISTANT PROFESSOR IN IMMUNOLOGY.** This individual should have the Ph.D., D.V.M., M.D., or equivalent degree, and a demonstrated capability in research and teaching. He/she will be asked to: (i) collaborate in research efforts using retrovirus induced and genetically programmed disease models, (ii) team teach in an immunobiology course, and (iii) develop an independent research laboratory over several years. If interested, please send curriculum vitae and names of three references we may contact to:

Dr. Carol L. Reinisch
Chairman of Search Committee
Department of Comparative Medicine
Tufts University
School of Veterinary Medicine
136 Harrison Avenue
Boston, Mass. 02111

Tufts University is an Equal Opportunity Employer.

Closing date: 30 November 1985.

INVERTEBRATE PHYSIOLOGICAL ECOLOGIST

The University of Georgia, Department of Zoology, seeks a physiological ecologist/invertebrate zoologist for a tenure-track assistant professor appointment starting September 1986. The successful applicant is expected to develop a vigorous research program. Teaching responsibilities will include participation in a graduate/undergraduate course in invertebrate zoology (exclusive of insects) and a graduate course in the individual's area of expertise.

Application should include curriculum vitae and a statement of current research and teaching interests. Application and three letters of reference should reach the committee by 30 November 1985. Apply to: **Dr. James W. Porter, Chairman, Search Committee, Zoology Department, University of Georgia, Athens, Ga. 30602.**

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

NEUROBIOLOGIST

Applications are invited for a tenure-track assistant professor position to begin August 1986. Applicants should have broad experience in neurobiology and be interested in pursuing cellular and biochemical research in an area such as synaptic and integrative mechanisms, neurotransmitter/neuromodulator interactions, or control of receptor/membrane excitation. The successful candidate will be expected to develop an independent research program that complements the ongoing neuroscience research in the school and to participate in graduate and undergraduate teaching. Forward curriculum vitae, copies of recent publications, statement of research objectives, and names of three references by 15 November 1985 to: **Neurobiology Search Committee, School of Biological Sciences, University of Kentucky, Lexington, Ky. 40506.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

THE AMERICAN RED CROSS

AMERICAN RED CROSS LABORATORY TECHNOLOGIST position will be filled at the research assistant or one of the research associate levels. An undergraduate degree in chemical or biological sciences is required. Previous experience in basic research laboratory is preferred. Experience with monoclonal antibodies, tissue culture or molecular genetics is desirable. Send curriculum vitae, publications, and names of references to: **Jerry Custer, American Red Cross Blood Services, 1224 North Berkeley, Peoria, Ill. 61603; telephone: 309-674-7171.** Equal Opportunity/Affirmative Action Employer.

The University of Western Australia Perth DEPARTMENT OF ZOOLOGY LECTURER (TENURED)

Applications are invited from suitably qualified persons for appointment to a lectureship (tenured) in the Department of Zoology. Departmental research interests encompass comparative endocrinology, marine and freshwater biology, entomology, genetics and speciation, behaviour, marsupial ecology, and arid zone biology. The appointee will have expertise in comparative physiology, and preference will be given to applicants with expertise in invertebrates and, if possible, neurophysiology. The successful applicant will be expected to undertake undergraduate teaching at both general and specialist levels and to continue research in a chosen field. Further details are available from the head of the Department of Zoology, telephone: (09) 380 2237. Current salary range: A\$26,236 to A\$34,467 per annum. Benefits include superannuation, fares to Perth for appointee and dependent family, removal allowance, study leave, long service leave, and housing loan scheme. Closing date: 18 October 1985. Conditions of appointment will be specified in any offer of appointment which may be made as a result of these advertisements.

Applications in duplicate, setting out full personal particulars, qualifications, and relevant experience, and the names and addresses of three referees should reach: **The Staffing Officer, University of Western Australia, Nedlands, Western Australia, 6009, Australia** by 18 October 1985.

MARINE/PLANT SCIENTISTS

OCEAN GENETICS, INC., is a marine biotechnology firm engaged in the identification, production, extraction, and marketing of marine derived specialty chemicals, pharmaceuticals, and agrichemicals.

We are seeking to fill a few key research and research management positions at the M.S. and Ph.D. levels (or equivalent experience) in the following disciplines:

- Algal/Plant Biochemistry
- Algal Physiology
- Algal Mass Culture
- Polysaccharide/Carbohydrate Chemistry
- Natural Product Chemistry
- Algal Genetics

Past industrial experience preferred though not required.

Please send your résumé in confidence to:



**Ocean
Genetics, Inc.**

98 Main Street, Suite 407
Tiburon, Calif. 94920

PLANT BIOLOGY Washington University

A position for an assistant or associate professor in the Department of Biology will be available in 1986. Applicants should have several years of productive postdoctoral experience. Research interests should complement current strengths of the department and other plant molecular biologists and biochemists on the faculty. We are especially interested in candidates whose research relates to organelle biogenesis, protein processing, translocation, and/or integration of proteins into membranes, protein function, and turnover. However, candidates with other research interests in plant biology are also encouraged to apply. The average teaching responsibility is forty contact hours per year. Applications, including current curriculum vitae, statement of research goals, and at least three letters of reference, should be addressed to: **Dr. Roger Beachy, Plant Biology Search, Department of Biology, Washington University, St. Louis, Mo. 63130.** An Equal Opportunity/Affirmative Action Employer.

MANAGER PHARMACOLOGY

Adria Laboratories, a growing division of an international healthcare company, has an immediate need for a professional to manage our Pharmacology Unit.

You must have demonstrated ability and hands-on experience in Pharmacokinetics and drug metabolism. You will coordinate all activities within the department and have a key role in regulatory submissions, support of medical and marketing activities and for evaluating new drug candidates.

The position, reporting to the Director of Research, requires a PhD in Pharmacology and 5+ years experience along with strong managerial and leadership qualities. You will find our compensation package is responsive to your future needs. For consideration, send your resume and salary history to:

ADRIA LABORATORIES
Attn: Steve Wolfe
P.O. Box 16529
Columbus, OH 43216

An Equal Opportunity Employer M/F/H/V

UNIVERSITY OF COLORADO. VISITING FACULTY AND POSTDOCTORAL FELLOWSHIPS FOR RESEARCH IN ATMOSPHERIC AND CLIMATE DYNAMICS, ENVIRONMENTAL AND ATMOSPHERIC CHEMISTRY, ENVIRONMENTAL BIOCHEMISTRY, AND GEOCHEMISTRY. One-year awards offered by the Cooperative Institute for Research in Environmental Sciences (CIRES). CIRES is supported by NOAA and the University of Colorado. Awards may be made to senior scientists, including those on sabbatical leave, or to recent Ph.D. recipients. Stipends average \$25,000 for 12 months. The program is open to scientists of all countries. Selection of awardees is made in part on the likelihood of active interaction with CIRES scientists and other research groups in Boulder. Senior CIRES-affiliated scientists working in these fields include James Avery, Susan Avery, Ben Balsley, Roger Barry, John Birks, R. Ray Fall, Lang Farmer, Fred Fehsenfeld, Alexander Goetz, Howard Hanson, William Hay, Murray Johnston, Bruce Koel, Eric Kraus, Uwe Radok, Colin Ramage, George Reid, Robert Sani, Russ Schnell, Robert Sievers, and Harold Walton. Applications for the 1986-1987 academic year awards should be sent to: **Professor John Birks, Acting Director, CIRES, Visiting Fellows Program, Campus Box 449, University of Colorado, Boulder, Colo. 80309.** Include curriculum vitae, publications list, and a brief outline of the proposed research. In addition, applicants should request that three persons familiar with their qualifications send letters of recommendation. Junior applicants should submit undergraduate and graduate transcripts. First consideration will be given to applications received by 1 December. Final application deadline is 15 February. *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

**PHD
SCIENTISTS
& ENGINEERS!**
APPLY FOR RESEARCH AWARDS!

Unique opportunities offered for independent research in the fields of

- chemistry
- earth and atmospheric sciences
- engineering, mathematics and applied sciences
- life and medical sciences
- space and planetary sciences
- physics

The National Research Council in cooperation with selected federal laboratories will offer approximately 350 awards in 1986 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at the participating federal laboratories. Many of the 25 programs are open to experienced senior scientists as well as to recent PhD's. Stipends begin at \$26,350 for recent graduates and are appropriately higher for seniors. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:

Associateship Programs (JH608/S-4)

National Research Council

2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Deadlines for application are January 15, April 15 and August 15.

PURDUE SCHOOL OF SCIENCE—IUPUI CHAIRPERSON DEPARTMENT OF BIOLOGY

The Purdue School of Science at Indianapolis invites nominations and applications for the position of chairperson for the Department of Biology. The School of Science is a major academic unit of Indiana University—Purdue University at Indianapolis (IUPUI) serving more than 1,000 students majoring in science.

IUPUI is a comprehensive urban university with over 23,000 students. Located in the capital city, the university is the third largest in the state, has close ties with local biomedical industry and the IU School of Medicine. Indianapolis is a dynamic metropolitan city with a commitment of growth and development.

The 17-member Biology Department is autonomous in its offering of B.S. and M.S. degrees. The Ph.D. is available in collaboration with Purdue University. The Biology Department is committed to teaching and research excellence in areas ranging from ecology to molecular biology. The person appointed will have an established reputation for outstanding leadership in research and the ability to lead, manage, and coordinate the activities of the Biology Department.

The position is a 12-month appointment with full professor rank. The preferred starting date is 1 July 1986. Nominations and applications, including curriculum vitae, statement of research interests, and names of three references, should be sent no later than 1 November 1985 to:

Chairman—Search Committee
Purdue School of Science
Biology Department
1125 East 38 Street, P.O. Box 647
Indianapolis, Ind. 46223

IUPUI is an Equal Opportunity/Affirmative Action Employer



ANNOUNCEMENT AND CALL FOR PAPERS

INTERNATIONAL SYMPOSIUM METALS SPECIATION, SEPARATION AND RECOVERY

**July 27-31, 1986
Chicago, Illinois**

Sponsors

Industrial Waste Elimination Research Center
Illinois Institute of Technology
and
Water Research Institute
Italian National Research Council

Symposium Chairman
James W. Patterson, Ph.D.
IIT

Topics include:

- Metals Chemistry - Soluble and Solid Phases
Analytical Methodologies, Metals Speciation, Equilibrium Chemistry, and Reaction Kinetics
- Metals Separation Research
Precipitation, Ion Exchange, Adsorption Process, Electrochemical Processes, and Other Processes
- Metals Recovery Process Applications
Process Research, Case Studies, and Economic Evaluations

Symposium speakers and participants will be selected according to research interests and activities. Authors are invited to offer papers within the range of symposium topics.

For further information and applications:

Secretariat Office - International Symposium
CAPS, Ltd.

50 Green Bay Road, Lake Bluff, IL 60044, (312) 234-2353

POSITIONS OPEN

MICROBIAL GENETICIST/MOLECULAR BIOLOGIST

The Department of Biology in the Division of Biology and Biomedical Sciences, at Washington University in St. Louis, is seeking an individual with research expertise in the genetics and/or molecular biology of prokaryotes. Microbiologists who will interface with existing strong programs in genetics, developmental biology, population biology and ecology, plant biology, and molecular biology are especially encouraged to reply. Preference will be given to those candidates with strong credentials for, and commitment to, developing an independent research program. An interest in, and aptitude for, teaching undergraduate and graduate students is of equal importance. The average teaching responsibility is for 40 contact hours per year.

The position can be at any faculty rank but individuals at the assistant professor level will have priority. Interested individuals should send curriculum vitae and a letter indicating past, current, and future research interests, and arrange to have three letters of reference sent to: Dr. Roy Curtiss III, Chairman of the Search Committee, Department of Biology, Box 1137, Washington University, St. Louis, Mo. 63130. Washington University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY

Sabbatical replacement for 1986-1987 academic year. Applicants will be expected to teach an advanced course in molecular biology, a laboratory methods course in the spring 5-week short term, participate in the department's introductory course, and offer other advanced seminars and/or electives of their choice. Send curriculum vitae and names of three references to:

Dr. Joseph G. Pelliccia
Search Committee/Molecular Biology
Department of Biology
Bates College
Lewiston, Maine 04240
Telephone: 207-786-6112

Deadline for applications is 1 November 1985. Bates College is an Equal Opportunity Employer.

NEUROANATOMY-NEUROPATHOLOGY POSTDOCTORAL RESEARCH POSITION, HARVARD MEDICAL SCHOOL. Research on the brains of humans and other primates, including connections of limbic and association areas, receptor autoradiography, and organization of transmitter-specific pathways. Also experimental neuropathology of Alzheimer's disease and other dementias. NIH pay scales. Send curriculum vitae and references to: M. Mesulam, M.D., or E. Mufson, Ph.D., Neurology Unit, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.

ORGANIC RADIOCHEMIST. A position is available for a radiochemist in a research-oriented nuclear medicine laboratory. Experience in organic synthesis of radioactive tracers with both positron and single emitting radionuclides is extremely desirable. Active research is pursued in PET, SPECT, NMR, and monoclonal antibodies. Send curriculum vitae to: Abass Alavi, M.D., Chief, Nuclear Medicine, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Qualified female and minority candidates are encouraged to apply.

Ph.D. OR POSTDOCTORAL ORGANIC CHEMIST, entry-level position, with strong background in synthetic organic chemistry, including the total synthesis of organic compounds. Experience in the synthesis of complex carbohydrates, glycopeptides, and glycoconjugates is desired. U.S. citizen or permanent resident holders only. Send résumé and publication list to: Dr. T. J. Logan, Manager, Ph.D. Recruiting, Procter & Gamble Co., P.O. Box 39175, Cincinnati, Ohio 45247. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS

Areas of investigation include: (i) characterization of the structure and function of the sodium potassium ATPase and the expression of its genes. Our laboratory has recently cloned both the cDNA and genes for the α subunit, (ii) the regulation of the expression of human and goat globin genes using in vitro and in vivo systems. Send résumé to: Jerry B. Lingrel, Ph.D., Department of Microbiology and Molecular Genetics, University of Cincinnati, College of Medicine, Cincinnati, Ohio 45267. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NMR SCIENTIST/ENGINEER

FIELD EFFECTS, INC., is seeking an NMR scientist/engineer to join an innovative team of engineers and scientists developing a state-of-the-art, low-cost MRI scanner based on permanent magnet technology. The successful candidate will be involved with integrating the magnet, electronic, and data-processing systems; developing the imaging methodology; and supervising the clinical trials. The necessary qualifications are a familiarity with NMR and MRI techniques.

Field Effects, Inc., was founded for the purpose of commercially developing a permanent magnet-based MRI system utilizing proprietary technologies and innovative design concepts. To that end, we have assembled a top-rate staff of NMR scientists, software engineers, magnet design engineers, and electronics engineers. The result of this development will be a product that is a more cost effective solution to current MRI instrumentation. Field Effects is located in the prestigious Boston suburb of Acton, Massachusetts, which offers a pleasant combination of New England country living and easy access to Boston.

Interested candidates should send a résumé to: Denise Silva, Field Effects, Inc., 6 Eastern Road, Acton, Mass. 01720, or telephone: 617-264-4099.

PATHOLOGIST-IN-CHIEF

The Children's Memorial Hospital in Chicago is seeking an experienced academic pediatric pathologist to head the Department of Pathology. The candidate must be Board-certified in pathology. The candidate should have a strong commitment to teaching and research, as well as evidence of administrative ability.

The Department of Pathology operates as a laboratory service of the hospital and comprises anatomic pathology services and the clinical laboratories. The latter includes clinical chemistry, toxicology, microbiology, virology, the blood bank, and hematology. The Children's Memorial Hospital is the pediatric unit of Northwestern University Medical School, and all full-time staff of The Children's Memorial Hospital are on the faculty at Northwestern University.

Interested applicants should send their curriculum vitae and the names and addresses of three references to: Andrew K. Poznanski, M.D., Chairman of the Search Committee for Pathologist-in-Chief, Department of Radiology, The Children's Memorial Hospital, 2300 Children's Plaza, Chicago, Ill. 60614. The Children's Memorial Hospital is an Equal Opportunity Employer.

PHARMACOLOGIST. Emory University has a new position at assistant professor or associate professor rank which requires doctoral or equivalent degree; for assistant professor at least 1 year of postdoctoral research experience and potential to develop independent research program; for associate professor five or more years of experience in research and teaching in pharmacology or related discipline, evidence of excellent independent research, and current grant support. Strong commitment to research and teaching essential. Molecular, cellular, or neurophysiological research approaches to pharmacological problems preferred. Starting date negotiable. Curriculum vitae, description of career goals, proposed research program, and three letters of recommendation must be received by 15 November 1985. Address to: Dr. Neil C. Moran, Chairman, Department of Pharmacology, Emory University, Atlanta, Ga. 30322.

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION open immediately in molecular immunology to study the structure-function relationship of the murine T cell receptor. Applicant must have experience in molecular biology. Background in cellular immunology preferred but not required. Send curriculum vitae and three letters of recommendation to: Brigitte Huber, Ph.D., Department of Pathology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, Mass. 02111.

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY to work in the benzodiazepine-GABA receptor and endogenous ligands using monoclonal antibodies. Ph.D. in biochemistry, cell or molecular biology. Send curriculum vitae and three reference names to: Dr. A. L. de Blas, Department of Neurobiology and Behavior, 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 250-85.

POSITIONS OPEN

The Psychology Department at Indiana University-Bloomington anticipates for fall 1986 a tenure-track opening at a junior level in the following four areas: **PHYSIOLOGICAL PSYCHOLOGY-NEUROSCIENCE, COGNITIVE, DEVELOPMENTAL, AND CLINICAL PSYCHOLOGY.** Pending funding, positions can be upgraded to a senior level. Outstanding applicants in other areas will also be considered, especially if their interests extend beyond traditional area boundaries. Applications received before 1 November 1985 will be assured of consideration. Send curriculum vitae, (p)reprints, and three letters of reference to: Professor I. J. Saltzman, Department of Psychology, Indiana University-Bloomington, Ind. 47405. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for a biochemist to study the structure and function of extracellular matrix glycoconjugates and their role in inflammation and tissue repair. Concurrent appointment at Shriners Burns Institute and Massachusetts General Hospital. Send curriculum vitae to: Dr. David A. Swann, Shriners Burns Institute, 51 Blossom Street, Boston, Mass. 02114.

Applications are invited for **TWO POSTDOCTORAL POSITIONS** which should become available in 1986 at Yale. One scientist is sought to participate in research on ribosome structure and function making use of neutron scattering techniques. The second will engage in crystallographic studies on 5S RNA and its complexes with ribosome proteins. While prior experience in related areas of research is desirable, it is not essential. Whatever training is necessary will be provided. Send applications to: Dr. Peter B. Moore, Department of Chemistry, Yale University, P.O. Box 6666, New Haven, Conn. 06511.

POSTDOCTORAL POSITION available immediately to study formation and repair of DNA alkylation products produced by chloroethylnitrosoureas. Ph.D. in biochemistry with experience in organic synthesis helpful. Starting salary: \$16,000 to \$20,000 per 12 months. Must be U.S. citizen or have J-1 visa. Send curriculum vitae and three letters of recommendation by 15 November to: Dr. William Bodell, University of California, San Francisco, HSW-783, San Francisco, Calif. 94143-0520.

BOSTON UNIVERSITY POSTDOCTORAL POSITION

Postdoctorate for person experienced in neuroendocrinology/behavioral endocrinology. Interests of the laboratory concern hormonal regulation of brain and behavioral sexual differentiation in higher mammals. Available immediately. Send curriculum vitae and names of three references to:

Dr. Michael Baum
Department of Biology
Boston University
Boston, Mass. 02215

POSTDOCTORAL POSITION in neurobiology available to study Alzheimer's disease and other neurodegenerative disorders. Experience in biochemistry and molecular biology preferred: projects encompass immunohistochemistry, protein chemistry, monoclonal antibodies, cell-sorting, and protein and recombinant DNA techniques. Funding agency requires candidate to be U.S. citizen or permanent resident. Send curriculum vitae and three references to: Dr. Carol Miller, Department of Pathology, University of Southern California, School of Medicine, 2011 Zonal Avenue, Los Angeles, Calif. 90033; telephone: 213-224-7360.

POSTDOCTORAL POSITIONS are available in the Department of Physiology and Biochemistry to conduct research into the role of retinoids in the immune response, or the hepatic enzymes that metabolize vitamin A. Background or experience in nutrition and immunology or cell biology and enzymology is desirable. Please send curriculum vitae, a brief statement of goals, and names of three references to: Dr. A. Catharine Ross, Department of Physiology and Biochemistry, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129.

POSTDOCTORAL POSITION RICE UNIVERSITY

The Department of Biochemistry, Rice University, announces the availability of a postdoctoral position. The applicant should have experience in site-specific mutagenesis using M13 and plasmids. Also, prior experience in recombinant DNA and protein isolation. All information should be forwarded to: K. S. Matthews, Biochemistry Department, Rice University, P.O. Box 1892, Houston, Texas 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.

**EXPERIMENTAL PHYSICIST
IN ATOMIC PHYSICS/SPECTROSCOPY**
SPACE SCIENCE LABORATORY
NASA - MARSHALL SPACE FLIGHT CENTER
Huntsville, Alabama 35812

The Atomic Physics Branch is seeking one or more researchers with a successful background in experimental atomic physics and spectroscopy to conduct research related to the physics, chemistry, and dynamics of the upper atmosphere and its response to the solar UV and particle energy influx. Areas of particular interest will be the measurement of cross-sections, reaction rate coefficients, surface effects, and excitation processes.

An experimental laboratory program is being established in support of the atmospheric physics and aeronomy studies. These studies include the induced space vehicle environment. Theoretical models are completed by spectroscopic and imaging investigations from the Space Shuttle, satellites, and high altitude balloons. Measurement capabilities extend from the extreme ultraviolet to the infrared and include state-of-the-art instrumentation incorporating intensified-CCD detectors and microprocessor control. State-of-the-art laboratory facilities and equipment are available for instrument design, development and calibration. Computer facilities offer various mini-computers including a VAX. These facilities are being upgraded and will soon be unsurpassed.

Salary will range from \$31,619 to \$37,599 per annum, depending upon experience. Forward resumes to the following address not later than November 15, 1985:

Dr. M. R. Torr
ES55
Space Science Laboratory
NASA/Marshall Space Flight Center
Huntsville, AL 35812
(205) 453-0944



An Equal Opportunity Employer

U.S. Citizenship Required

ASSOCIATE DIRECTOR PREVENTION PROGRAM

The National Cancer Institute (NCI), National Institutes of Health (NIH) is conducting a search for candidates for the position of Associate Director, Prevention Program in the Division of Cancer Prevention and Control (DCPC). The Associate Director plans, directs and conducts a multidisciplinary research program of preclinical and clinical trials in cancer detection. The research areas encompassed include cancer detection, chemoprevention, and diet and cancer prevention.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$61,296 to \$68,780 per annum. Candidates may be eligible for Physicians' Comparability Allowance up to \$10,000 per year.

Position information and qualification requirements may be obtained by contacting Mr. Jerry Chambers; Personnel Management Specialist; NCI Personnel Office; Bldg. 31, Rm. 3A32; 9000 Rockville Pike; Bethesda, MD 20205-0031, telephone number (301) 496-6862.

Applications (SF-171, curriculum vitae and bibliography) must be submitted to the above address and postmarked not later than October 31, 1985.

The National Institutes of Health is an EQUAL OPPORTUNITY EMPLOYER.

PhD CHEMISTS

Postdoctoral Fellowships

The Photon Processes Group of Amoco Corporation is currently accepting applications for highly motivated PhD Chemists. *These positions will be available in early 1986.* Working within the Amoco Research Center, candidates will conduct picosecond spectroscopic studies of inorganic and organometallic complexes with Dr. Thomas L. Netzel.

Qualified individuals must possess demonstrated experimental ability, command of standard inorganic and organometallic procedures and a strong familiarity with modern instrumentation and laboratory computers.

These one year appointments (renewable for a second year by mutual agreement) are ideally suited for professionals seeking invaluable exposure and the opportunity to work in a first-class industrial environment. Competitive industrial level salary and attractive benefits package offered. Because we are located in Naperville, Illinois, just 30 miles west of Chicago, a choice of urban, suburban, or rural living is available to you.

If you meet the above qualifications, please send your resume, transcripts of scientific and mathematical courses, and three (3) letters of recommendation to:

Professional Recruiting Coordinator

AMOCO RESEARCH CENTER

P.O. Box 400, Dept. TLN/9-27
Naperville, IL 60566

NO PHONE INQUIRIES PLEASE

Equal Opportunity Employer M/F/H



POSITIONS OPEN

POSTDOCTORAL POSITION

Conduct research on thermally induced interactions in food proteins: to study thermodynamics of protein stability and physicochemical basis of protein: protein association and network formation in films and gels using rheological methods.

Ph.D. in biochemistry or equivalent and knowledge of protein and colloid chemistry.

Send résumé, three references, and statement of interest to:

Professor J. E. Kinsella
Institute of Food Science
Stocking Hall
Cornell University
Ithaca, N.Y. 14853
Telephone: 607-256-7616

POSTDOCTORAL POSITION IN NEUROPHARMACOLOGY available immediately for the study of the actions of serotonin in the CNS. Project includes the pharmacologic characterization of central serotonergic receptors using both radioligand-binding techniques and measures of functional receptors. Collaborators for drug design and synthesis are available. Send curriculum vitae and names of three references by 30 November 1985 to: Dr. David L. Nelson, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona, Tucson, Ariz. 85721. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately for research dealing with metabolism and pharmacologic mechanisms of antiepileptic drugs. Specific areas of investigation include blood-brain transport, drug distribution and metabolism in brain, and GABA-ergic neurochemistry. Work will involve rodent seizure models and analysis of drug metabolites using stable isotope methodology and gas chromatography-mass spectrometry. Experience in neuropharmacologic techniques and/or drug metabolite analysis is desirable. Send curriculum vitae and names of three references to: Dr. Danny D. Shen, Department of Pharmaceutics, BG-20, University of Washington, Seattle, Wash. 98195.

POSTDOCTORAL POSITION available in group studying expression of cloned human ferritin genes in normal and diseased states. Applicants should have a strong background in molecular biology. Please send curriculum vitae and three references to: Dr. Jim Drysdale, Department of Biochemistry, Tufts University School of Medicine, Boston, Mass. 02111.

POSTDOCTORAL POSITION IN IMMUNOLOGY/BIOCHEMISTRY. Available immediately. Starting salary: \$25,000. Unusual opportunity for a joint appointment at University Health Center and private biotechnology company. Appointment for 2 years with possibility for a permanent position thereafter. Seeking someone to undertake development of nonisotopic immunoassays. Please send curriculum vitae and references to: Chimerix Corporation, 310 Farmington Avenue, Farmington, Conn. 06032.

POSTDOCTORAL POSITIONS available immediately to study the role of the extracellular matrix in oncogenic transformation. Experience in biochemistry/cell biology/molecular biology preferred. Expertise in protein purification/characterization or production of monoclonal antibodies desirable. Send curriculum vitae and three letters of recommendation to: Dr. Susan P. Hawkes, Department of Pharmaceutical Chemistry, S-926, University of California, San Francisco, Calif. 94143. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN GENETICS for work on the behavior of the P family of transposable elements in *Drosophila*. Candidates should have experience in molecular techniques and be interested in learning some classical *Drosophila* genetics. Starting date is flexible. Send curriculum vitae to:

Dr. William R. Engels
Genetics Department
University of Wisconsin
Madison, Wis. 53706

POSTDOCTORAL POSITION available immediately for Ph.D. with experience in biochemistry to study nucleic acid precursor levels and DNA repair in mutagen-sensitive mutants of *Neurospora crassa*. Salary range: \$18,000 to \$22,000 per annum. Appointment up to 3 years. Send curriculum vitae and names of three references to: Dr. Alice L. Schroeder, Program in Genetics and Cell Biology, Washington State University, Pullman, Washington 99164-4350. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION at Massachusetts Institute of Technology (MIT) available immediately to further characterize a recently purified receptor-like protein for polycyclic aromatic hydrocarbons [see *Mol. Pharm.* 26, 353 (1984)]. Structural studies, antibody preparation, and functional studies will be carried out. Some experience with protein purification and/or receptor/ligand interactions would be useful. Ph.D. in biochemistry or pharmacology preferred. Send curriculum vitae and the names of three references to: Professor Michael A. Marletta, Department of Applied Biological Sciences, Room 56-229, MIT, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION BROWN UNIVERSITY

Position available for individual interested in areas of protein-nucleic acid interactions, gene structure and regulation, protein structure-function or molecular mechanisms of genetic recombination. Previous experience with, or desire to learn, protein and/or nucleic acid biochemistry, genetics, DNA cloning, or in vitro systems. Please send résumé with desired starting date and list of three references to: Arthur Landy, Division of Biology and Medicine, Brown University, Providence, R.I. 02912. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION in molecular virology is available immediately to study gene regulation in negative-strand RNA viruses [*Nucl. Acids Res.* 12, 3829 (1984); *Virology* 141, 102 (1985)]. Recent Ph.D. in molecular biology or microbiology preferred. Send résumé and names of three references to: Dr. Kailash Gupta, Department of Immunology/Microbiology, Rush Medical Center, 1753 West Congress Parkway, Chicago, Ill. 60612; telephone: 312-942-5459.

Rush is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL AND PREDOCTORAL POSITIONS AVAILABLE IMMEDIATELY

In cellular, subcellular, and molecular physiology and biophysics, with emphasis in cardiovascular physiology, electrophysiology, membrane biophysics, contractile mechanisms, neurophysiology, cellular physiology, mechanism of thrombosis, renal physiology, transport, and reproductive endocrinology, vascular smooth muscle electrophysiology, and pharmacology. Applicants should be U.S. citizens or permanent residents.

Send résumé to:

Dr. Nicholas Sperelakis
Department of Physiology and Biophysics
University of Cincinnati
College of Medicine
Cincinnati, Ohio 45267-0576

A position of **POSTDOCTORAL RESEARCH ASSOCIATE** is available in an ongoing study on the physical and chemical basis of lipid regulation of various types of transport in native and reconstituted membranes [see *Biochem.* 23, 6901 (1984); *Biochem.* 24, 2865 (1985)]. Applications are invited from individuals with a background in biochemistry, biophysics or membrane physiology. Salary will be based on experience. Inquiries should be sent with curriculum vitae and three letters of recommendation to:

Dr. D. L. Melchior
Department of Biochemistry
University of Massachusetts Medical School
Worcester, Mass. 01605

POSTDOCTORAL RESEARCH ASSOCIATE. Ph.D. in biochemistry or physiology. Prefer experience in protein analysis methods such as PAGE, autoradiography, Western blotting, and other gel chromatographic analyses. To participate in diabetes/metabolism laboratory on work isolating and characterizing glucose transporters from isolated capillaries and cultured vascular cells. Send résumé to: Dr. A. McCall, University Hospital E-211, 75 East Newton Street, Boston, Mass. 02118.

POSTDOCTORAL RESEARCH ASSOCIATE positions are available to study the effects of general anesthetics on model and intact systems. The openings are for a biophysicist with a strong background in NMR spectroscopy and for a biochemist with experience in membrane biochemistry. Candidates will be involved in *in vivo* NMR spectroscopy and imaging. Send résumé and letters of reference to: Professor Alice M. Wyrwicz, Department of Chemistry, University of Illinois at Chicago, P.O. Box 4348, Chicago, Illinois 60680. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH APPOINTMENTS are occasionally available with individual faculty members of the Departments of Chemistry and of Chemical Engineering, The University of California, Berkeley, Calif. 94720. Appointments are normally made for a year, but with the possibility of renewal for a second. Highly qualified persons are invited to apply for positions to be assumed at the time of, or shortly after, the completion of doctoral studies. A single application should be addressed to the faculty member with whom the applicant prefers to be associated. (In the event that no position is available with that faculty member, the application will be circulated to other faculty members with similar research interests.) Arrangements should be made for one confidential letter of reference to be sent by the person best able to judge the applicant's research achievements and potential. Applications should include a résumé, a brief statement of research experience, interests and goals, and the names and addresses of two additional references. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately to perform clinical research involving production of collagen by fibroblast cultures obtained from patients with inherited and metabolic bone disease. Requires 1 year of experience and knowledge of tissue culture, PAGE, isolation and identification of procollagens and collagens, recombinant DNA technology, mRNA extraction and measurement. Send curriculum vitae and three letters of reference to: J. R. Shapiro, M.D., Pratt Diagnostic Clinic, 171 Harrison Avenue, Boston, Mass. 02111.

POSTDOCTORAL RESEARCH ASSOCIATE. Two positions available January 1986 or thereafter to study mechanisms of action of cancer chemotherapeutic platinum drugs. The projects will involve either DNA damage and repair, mutagenesis or characterization of genes involved in cellular resistance. Experience in molecular biology an advantage for one position. Send curriculum vitae and three letters of recommendation to: Dr. Alan Eastman, Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, Neb. 68105.

POSTDOCTORAL RESEARCH CHEMIST wanted to assist in developing innovative gel/adhesive matrices and chemical detection systems for investigations of transdermal chemical migration. The position offers experience with advanced transdermal pharmaceutical systems and pharmacokinetics. Knowledge of gel/adhesive chemistry and HPLC/GC is highly desirable. Send curriculum vitae to: Carl Peck, M.D., c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. Telephone: 301-295-3239/40.

Minneapolis—**UNIVERSITY OF MINNESOTA**—Department of Psychiatry seeks a **PSYCHIATRIST** to fill a faculty position as **assistant professor** with a probationary appointment towards tenure. The position entails commitment to research and teaching. The successful applicant will share with other faculty members responsible for one of several teams which treat hospitalized and nonhospitalized general psychiatric patients. Each team, in addition to treating patients, has the responsibility of training residents, medical students, and psychology interns. The teams may develop specialized treatment and research programs for particular psychiatric disorders. Applicants should be Board-eligible, with demonstrated interest and ability to do psychiatric research. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities. Send résumé to: Elke Eckert, M.D., Box 393 Mayo, University of Minnesota Hospitals, Minneapolis, Minn. 55455, by 31 October 1985.

RESEARCH ASSOCIATE

Research associate position (recent Ph.D. level) available late 1985. Project involves studies of nutrient, carbon, and oxygen dynamics in Chesapeake Bay and is expected to continue for several years. Applicants must have training/experience in relevant aspects of estuarine/marine ecology. Position involves participation in field, laboratory, and interpretive portions of the program. Salary will be consistent with University of Maryland guidelines. Please send curriculum vitae, statement of research experience, and three references with addresses to: Dr. W. R. Boynton, Chesapeake Biological Laboratory, P.O. Box 38, Solomons, Md. 20688-0038. Deadline for applications is 4 November 1985. An Equal Opportunity/Affirmative Action Employer.



US Army Corps of
Engineers
Cold Regions Research &
Engineering Laboratory

SUPERVISORY RESEARCH PHYSICAL SCIENTIST

\$44,430-\$57,759 per annum
(salary dependent upon
qualifications)



The U.S. Army Cold Regions Research and Engineering Laboratory is recruiting to fill two positions as Supervisory Research Physical Scientist, GM-14.

Position #RD0-209-85 serves as Chief of the Geological Sciences Branch. Directs the activities of approximately 15 professional, technical and support personnel engaged in basic and applied research. Fields of investigation include the effects of cold regions on hydrology, remote sensing applications, environmental sensing, terrain features and related phenomena. Performs research in a technical area related to the above.

Position #RD0-210-85 serves as Chief of the Geochemical Sciences Branch. Directs the activities of approximately 15 professional, technical, and support personnel engaged in basic and applied research. Fields of investigation include the effects of cold regions on the physical and chemical properties of frozen soils, pollution control, environmental impact and restoration, etc. Performs research in a technical area related to the above.

Qualifications: Bachelor's degree in a related field of science or engineering (PhD preferred) plus three years of appropriate experience or graduate education. Candidates must have demonstrated technical competence and the potential to function effectively in a research management position.

For information and official application forms contact: **Mr. Robert Hosenfeld, USACRREL-AP-RPA, 72 Lyme Road, Hanover, NH 03755-1290. Telephone (603) 646-4136.** Closing Date: November 20, 1985.

An Equal Opportunity Employer



TECHNICAL DIRECTOR

(\$68,700 per annum)



The U.S. Army Cold Regions Research and Engineering Laboratory (USACRREL), Hanover, N.H., is recruiting to fill the Senior Executive Service position of Technical Director, ES-0801.

Duties: Serves in the dual capacity of Technical Director and Deputy Director for USACRREL. Provides leadership and direction to the scientific and engineering research activities of the Laboratory. Is responsible for the planning, programming, and execution of USACRREL's research activities. Directs a staff of approximately 250-300 scientific, technical and administrative personnel.

Qualifications: A B.S. degree in engineering or a closely related field is required in addition to the mandatory technical and managerial qualifications specified in the vacancy announcement. An advanced degree and experience in cold regions involvement and research management are highly desirable.

For a complete copy of this announcement, application, and supplemental application statement, contact:

Mr. Thomas Peters, CDRUSACE (DAEN-PEC-S), 20 Mass. Avenue, N.W., Washington, D.C. 20314-1000.

Closing Date: December 15, 1985.

An Equal Opportunity Employer

ROCKEFELLER FOUNDATION BIOTECHNOLOGY CAREER FELLOWSHIPS

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, and reproductive biology.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to **Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.**

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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION. Two research scientists are available in the Department of Veterinary Microbiology, Texas A&M University. One position is dedicated to studies on the molecular genetics of *Brucella abortus* and requires an individual with a Ph.D. in molecular biology, microbiology, or biochemistry. The second position may be in any of the other disciplines of the department, namely, virology, immunology, avian diseases, bacteriology, or parasitology. Each appointment will be for an initial period of 2 years with an option for a 1-year extension.

Applicants should send curriculum vitae together with a list of publications and references to:

Dr. Ian R. Tizard
Professor and Head
Veterinary Microbiology and Parasitology
College of Veterinary Medicine
College Station, Texas 77843

POSTDOCTORAL RESEARCH POSITION available immediately to participate in ongoing studies to produce and evaluate murine and human monoclonal antibodies to prostate and bladder carcinomas and mesotheliomas. Applicants should have a strong immunological and/or biochemical background with experience in hybridoma production, protein purification, cell culture, radiolabeling, and a familiarity with RIA, ELISA, Western blots, and in vitro and in vivo cytotoxicity assays. Experience in flow cytometry, radioimmunologic imaging, immunohistochemistry and antibody conjugates also desirable. Salary will be \$18,000 per annum, plus fringe benefits. Send curriculum vitae, reprints, a statement of career and research goals, and the names of three references to: **Dr. George L. Wright, Jr., Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, 700 Olney Road, Norfolk, Va. 23501.** A nondiscriminatory, Affirmative Action Employer.

RESEARCH ASSISTANT. Two-year position involving study of wintering Canada geese in the Atlantic Flyway. Good biological background with strong statistical and computing skills necessary. Salary: \$17,000 per year, plus benefits. Send résumé, copy of college transcripts, and names of three references to: **Dr. Richard Malecki, New York Cooperative Fish and Wildlife Research Unit, Fernow Hall, Cornell University, Ithaca, N.Y. 14853.**

Seeking **RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW** for March of Dimes-funded Columbia University appointment available 1 November 1985. Interest in hormonal and developmental regulation of neuroendocrine gene expression and experience in molecular biology are desirable.

Please send curriculum vitae with detailed description of research expertise and three letters of reference to:

F. V. Nowak, M.D., Ph.D.
Assistant Professor of Medicine
Columbia University
College of Physicians and Surgeons
St. Luke's/Roosevelt Hospital Center
428 West 59 Street
New York, New York 10019

AMERICAN BIOGENETICS

RESEARCH SCIENTISTS

American Biogenetics Corporation, specializing in the genetic engineering and biodesign of microorganisms which produce specialty chemicals, has positions available for highly motivated research scientists. American Biogenetics is seeking to fill positions in:

● MOLECULAR GENETICS

To use recombinant DNA techniques to genetically alter and/or engineer biochemical pathways in *Escherichia coli* and *S. cerevisiae*.

● MICROBIAL PHYSIOLOGY

To design new biochemical pathways in *E. coli* and *S. cerevisiae* and to transfer these pathways to other industrially important microorganisms.

Successful applicants must possess a Ph.D. and have at least 2 years of postdoctoral experience. American Biogenetics offers a challenging and creative working environment and excellent opportunities for personal and scientific development. American Biogenetics is located in a desirable coastal area of Southern California.

Send curriculum vitae and the names of three references to: **Janice A. Sharp, Ph.D., Director of Research, American Biogenetics Corporation, 19732 MacArthur Boulevard, Suite 130, Irvine, Calif. 92715.**

POSITIONS OPEN

PROTEIN CHEMIST

A position is available for a skilled protein-peptide chemist to oversee a new instrumentation facility which incorporates peptide sequencing and synthesis. The successful applicant will interact with a small group of investigators working on the structure and function of proteins and peptides involved in chemical transmission in the nervous system. This appointment will be a nonfaculty career-level appointment. In addition to participating in the purification of peptides, this individual will be the principal operator of a gas-phase sequencer and automated synthesizer. Demonstrated experience in peptide chemistry and familiarity with the required equipment and techniques are highly preferred. Direct applications, including a description of relevant experience and the names of three references to: **Dr. Jonathan B. Cohen, Department of Anatomy and Neurobiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Mo. 63110.** An Equal Opportunity/Affirmative Action Employer.

QUANTITATIVE GENETICIST

The Department of Botany and Plant Sciences, University of California, Riverside, announces a position as **QUANTITATIVE GENETICIST**, available 1 July 1986. The position is a tenure-track, 11-month appointment in the College of Natural and Agricultural Sciences and in the Agricultural Experiment Station. Appointment will be at assistant, associate, or full professor level, depending on the experience of the successful candidate. Ph.D. is required, and postdoctoral experience is preferred. The appointee will be expected to develop a vigorous, innovative, independent research program in basic quantitative genetics with applications to plant breeding. He/she will be expected to offer an advanced course in quantitative genetics and biometrics and to contribute to the departmental undergraduate teaching programs. Guidance of graduate students will also be expected.

Send relevant information, including curriculum vitae and official transcripts, and arrange to have at least three letters of recommendation sent to: **Dr. R. K. Soost, Search Committee Chairman, Department of Botany and Plant Sciences, University of California, Riverside, Calif. 92521.** Application deadline is 15 December 1985 or later if a suitable candidate has not been selected.

The University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

RESEARCH ASSOCIATE position available for Ph.D. in molecular biology for the study of growth, development, and aging in normal mammalian tissues. This project involves study of the molecular biology and biochemistry of growth regulation in polyploid cells from normal blood vessels. Prefer experience working with vascular cells and/or cell culture. Please send curriculum vitae to: **Dr. Elliot M. Rosen, Joint Center for Radiation Therapy, Harvard Medical School, 50 Binney Street, Boston, Mass. 02115.**

RESEARCH POSITION available to participate in an ongoing recombinant-DNA project. Person must have experience with modern methods on molecular biology, SDS-PAGE, cloning, and gene sequencing. Qualified applicants should have a B.S. or M.S. in the biological sciences with at least 2 to 3 years of laboratory experience. Liberal benefits offered and salary will be commensurate with experience. To apply, send curriculum vitae and letters of reference to: **Personnel Manager, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, New York 12946.** Refer to Job Order CR 8507.

Affirmative Action/Equal Opportunity Employer

UNIVERSITY OF COLORADO—VICE PRESIDENT FOR ACADEMIC AFFAIRS AND RESEARCH AND DEAN OF THE GRADUATE SCHOOL. The vice president serves as the graduate dean and principal academic affairs and research officer of the University system. The president's offices are located in Boulder. The candidate must be an established scholar eligible for tenure appointment, with demonstrated abilities to deal effectively with internal and external constituencies. Familiarity with multi-campus systems and graduate school program development desirable. Send application, curriculum vitae, and three references postmarked by 25 October 1985 to: **Theo. Volsky, Jr., Chair, Search Committee, University of Colorado, Box 27, Boulder, Colo. 80309-0027.**

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

POSITIONS OPEN

The Department of Ecology and Evolutionary Biology, University of California, Irvine (UCI), announces a new tenure-track (assistant professor) position for a **QUANTITATIVE EVOLUTIONARY THEORIST**, to join our expanding and excellent group of evolutionary biologists. The group now includes a quantitative geneticist, an experimentalist in microbial coevolutionary processes, and a specialist in the evolution of life-histories and genetic systems. To this more empirically oriented core of individuals we wish to add an interactive individual with highly theoretical and quantitative approaches to evolutionary studies of either plant or animal systems. We are looking for persons only of exceptional merit, and postdoctoral experience is required. *UCI is an Equal Opportunity/Affirmative Action Employer.*

Please send letter of application, curriculum vitae, reprints (published) or manuscripts (in press) of key publications, statement of research interests and goals, and names, addresses, and telephone numbers of at least four references to:

Search Committee
Department of Ecology and Evolutionary Biology
University of California
Irvine, California 92717

Deadline for receipt of application is 15 November 1985.

RESEARCH SPECIALIST

Research specialist opening is available in the Department of Physiology and Biophysics under the direction of Dr. Harvey Weiss to study O₂ supply/demand in myocardial ischemia. Master's degree in a relevant science plus 1 year of research experience are required. Candidates should have training in cardiovascular physiology or pharmacology. Ph.D. preferred. Please send résumé to: **Office of Human Resources, University of Medicine and Dentistry of New Jersey—Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.** An Equal Opportunity/Affirmative Action Employer, M/F/H/V.

RESEARCH STAFF POSITION. Research in virus and cancer chemotherapy. Strong background in biochemistry and experience in enzyme isolation, enzyme kinetics, and cell culture desirable. Salary negotiable. Send résumé and names of three references to: **Dr. W. Prusoff, Department of Pharmacology, Yale University School of Medicine, New Haven, Conn. 06510.** An Equal Opportunity/Affirmative Action Employer.

STRUCTURAL GEOLOGIST Amherst College

The Department of Geology invites applications for a tenure-track faculty position in structural geology at the assistant professor level, beginning 1 July 1986. A Ph.D. is required. Postdoctoral work and interest/experience in geophysics or geochronology are desirable. Although bedrock mapping experience, preferably in the northern Appalachians, is essential, the applicant should also be well versed in the theoretical and experimental aspects of structural geology. The successful candidate will be responsible for teaching and research in structural geology as well as a course in tectonics and one related to the person's secondary field of interest.

Amherst College in an undergraduate liberal arts institution with an enrollment of 1530 students. The Geology Department has four full-time faculty members, a graduate fellow, and a technician.

Candidates should send a letter of application, résumé, statement of research interests, and the names and addresses of three referees to: **Chairman, Department of Geology, Amherst College, Amherst, Mass. 01002.** The deadline for response is 1 December 1985. *Amherst College is an Equal Opportunity/Affirmative Action Employer.*

SYNTHETIC ORGANIC CHEMIST

Work at the forefront in the development of new probe technology. Design, synthesize, test, and use new fluorescent dyes as probes to elucidate the structure, function, and health of biological cells and tissues. Skills with heterocyclic dyes and reactive chemical groups and knowledge of optical spectroscopic properties of organic chromophores will be useful. Enthusiasm is essential. Experienced B.A., recent postdoctoral or experienced postdoctoral associate will be considered. Write to:

Center for Fluorescence Research
in Biomedical Sciences
Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, Pa. 15213

An Affirmative Action/Equal Opportunity Employer

DVM-PATHOLOGIST

Board Certification Canadian Laboratory

The Warner-Lambert/Parke-Davis Pharmaceutical Research Division, a worldwide leader in pharmaceutical development, has two immediate openings in its Canadian Toxicology Laboratory for individuals with experience and/or training in laboratory animal pathology. Responsibilities will include the evaluation and interpretation of toxicology studies for the safety assessment of new therapeutic agents.

The requirements for these positions include DVM, MD, DVMPH.D or MDPH.D and at least 3 years' post-graduate training in Pathology and certification in Pathology.

Warner-Lambert Canada offers salary commensurate with experience and an excellent benefits package. Interested, qualified candidates may send resume, reference list and salary requirements in confidence to: **Dr. N.J. Barsoum, Director of Pathology, WL/PD Research Institute, 2270 Speakman Drive, Mississauga, Ontario L5K 1B4.** An Equal Opportunity Employer M/F/H.

**WARNER
LAMBERT**

RECEPTOR BIOCHEMIST

Ph.D. LEVEL

The Biochemistry Section within the Department of Pharmacology has an immediate opening for an experienced Scientist trained in receptor binding or receptor-effector mechanisms. Experience in leukotrienes or other eicosanoids is desirable, as is experience in cell culture or cell biology. The successful candidate will have the equivalent of a Ph.D. in biochemistry or related discipline and 2-4 years postdoctoral experience. Excellent oral and written communication skills are essential as is a documented record of research excellence.

Our research facilities adjacent to the University of Michigan campus in Ann Arbor, Michigan are among the best-equipped in the world and are exclusively devoted to the discovery and development of new drugs. We offer excellent compensation, benefits and working environment. Qualified candidates should forward resume together with salary requirements to: **Ms. D. Love, Human Resources Supervisor, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, Michigan 48105.** An Equal Opportunity Employer M/F/H.

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POSITIONS OPEN

SCIENCE POLICY ANALYST/RESEARCHER

Demanding, full-time position in Washington, D.C., for recent Ph.D. in biological science (cell biology, developmental biology, immunology, microbiology, molecular biology, physiology, or related area) with some postdoctoral experience. Broad background and excellent command of written and spoken English required. Experience in science writing a plus. Send curriculum vitae and three writing samples by 15 November 1985 to: **Denise DeSanctis, Office of Technology Assessment, U.S. Congress, Washington, D.C. 20510.**

Equal Opportunity Employer

SUPERVISORY PHYSICAL SCIENTIST or OCEANOGRAPHER: The Great Lakes Environmental Research Laboratory of the National Oceanic and Atmospheric Administration in Ann Arbor, Michigan, is seeking a senior level scientist to manage its Physical Limnology and Meteorology Group. Duties include directing a group of scientists, engineers, and technicians involved with research on Great Lakes water movements, temperature, waves, and oscillations with theoretical and experimental approaches to improve Great Lakes prediction. This position is in the Competitive Service and may be filled at either the GS-15 or GS-14 level. Entrance level salaries are \$52,262 and \$44,430 per annum, respectively. **SELECTION FACTORS:** Applicants should have demonstrated research ability and comprehensive understanding and be capable of directing research in the hydrodynamics of ocean, lakes, and the atmosphere, and in numerical prediction and simulation methods. Additional technical information may be obtained from: **Dr. Eugene J. Aubert, telephone: 313-668-2245.** Submit Form 171 and detailed résumé including bibliography of relevant publications, research experience, references, and education to: **Central Administrative Support Center—Personnel, 1747 Federal Building, 601 East 12 Street, Kansas City, Mo. 64106.** Applications must be postmarked no later than 8 November 1985 to receive consideration. *An Equal Opportunity Employer.*

TRAINING PROGRAMS

The Basic Science Departments (Anatomy, Biochemistry, Microbiology, Pathology, Pharmacology, Physiology), Medical School, University of Minnesota, periodically have openings for **POSTDOCTORAL TRAINING.**

For information about possible openings in these programs, write, specifying department of interest, to:

**University of Minnesota Medical School
Box 293 Mayo Building
420 Delaware Street, SE
Minneapolis, Minnesota 55455
Attention: James C. Nelson**

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

FELLOWSHIPS

CARDIOVASCULAR RESEARCH FELLOWSHIP

Postdoctoral fellow position available immediately for an M.D., Ph.D., or D.V.M. interested in developing research capabilities in the areas of cardiovascular regulation, cardiovascular dynamics, myocardial metabolism, coronary collateral dynamics, cardiovascular pharmacology, pathophysiology, cardiovascular instrumentation, and chronic animal models. Research training is in collaboration with investigators active in above areas. Well-equipped and staffed facilities on University of Missouri—Columbia campus provides for an intellectually stimulating and productive environment. Salary is in accordance with current National Institutes of Health stipends and is based on prior experience. The successful candidate must be a U.S. citizen or have a permanent visa. For immediate consideration, contact:

**Dean Franklin, Director
Dalton Research Center
University of Missouri—Columbia
Columbia, Mo. 65211
Telephone: 314-882-7586**

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FELLOWSHIPS

Smithsonian Institution Fellowship Program

GRADUATE STUDENT, PRE-, POST-, AND SENIOR POSTDOCTORAL FELLOWSHIPS in American history and material culture, anthropology, biological sciences, earth sciences, history of art, history of technology and science. Tenable in residence at the Smithsonian and its research facilities. Stipends and tenures vary. Deadline: 15 January, annually. Contact: **Office of Fellowships and Grants, Smithsonian Institution, Washington, D.C. 20560; telephone: 202-287-3271.** Awards are based upon merit, without regard to race, color, religion, sex, national origin, age, or condition of handicap of applicant.

MORRIS DOCTORAL FELLOWSHIPS SOUTHERN ILLINOIS UNIVERSITY (SIU)

Outstanding students are invited to compete for exceptional fellowships. Stipends of \$10,000, plus tuition, for up to 3 years of full-time study are available to support high calibre students entering any of 31 doctoral programs at Southern Illinois University at Carbondale. Application due date is 7 February 1986; notification of awards will be made by 15 April 1986. For detailed information and application materials, write:

**Morris Doctoral Fellowship Program
Dean of the Graduate School
Southern Illinois University
Carbondale, Illinois 62901**

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IMPERIAL CANCER RESEARCH FUND Research Fellowships

Three-year postdoctoral positions are available from November 1985 at the Imperial Cancer Research Fund Clare Hall Laboratories, South Mimms, Potters Bar, Hertfordshire (England), to study the molecular mechanisms of genetic recombination in a new laboratory under the direction of Dr. Stephen C. West.

Current projects include studies with *Escherichia coli* RecA protein, the identification of recombination/repair proteins from *S. cerevisiae* and the characterization of a cruciform-specific nuclease from yeast. Experience in microbial genetics, recombinant DNA technology, and/or protein purification is desirable.

Salary in range £9830 to £12,115 (revision pending), depending on qualifications and experience.

Please send curriculum vitae and the names and addresses of three referees to: **Dr. Stephen C. West, c/o Department of Molecular Biophysics and Biochemistry, Yale University, 260 Whitney Avenue, New Haven, Connecticut 06511.**

C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIPS

In diabetes research, molecular endocrinology, molecular biology, differentiation, reproductive biology, immunology, structure and function of membranes or lipid metabolism. Tenable in the Banting and Best Department of Medical Research for 2 years after 1 July 1986 with a competitive stipend. Available to new Ph.D.'s or candidates with less than 2 years of postdoctoral training by 30 June 1986. Send curriculum vitae, transcripts, and three letters of reference preferably before 1 November 1985 to: **Dr. Terry Delovitch, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada M5G 1L6.**

POSTDOCTORAL RESEARCH FELLOWSHIPS IN LUNG RESEARCH for 1985–1986 and 1986–1987 available in the University of California, Davis (UCD), Interdisciplinary Pulmonary Disease Research Group, Ph.D., M.D., or D.V.M. required. Ongoing research areas include nutritional aspects of lung disease, alveolar macrophage cytochemistry, respiratory glycoprotein biosynthesis and metabolism, lung collagen and elastin, lung liposomes and lipoprotein metabolism, airway nerves and blood supply, relationships of xenobiotic metabolism to pulmonary cytotoxicity, mechanism of respiratory epithelial differentiation, respiratory tract permeability, and inhalation toxicology. Eight UCD faculty with research activities in lung disease involved in fellowship training program. Send résumé to: **Dr. C. E. Cross, Division of Pulmonary Medicine, 4301 X Street, University of California, Davis Medical Center, Sacramento, California 95817.** *Equal Opportunity/Affirmative Action Institution.*

FELLOWSHIPS

IMPERIAL CANCER RESEARCH FUND Research Fellowships

Two postdoctoral, 3-year appointments, are available in our Oncogene Laboratory to work with Dr. H. Land [*Nature* 304, 596; *Science* 222, 771 (1983)] on projects involving studies of oncogene interaction in biologically defined differentiating cell systems and isolation of *myc*-like genes from tumours and normal cells.

Applicants with experience in the areas of molecular biology and/or cell biology are preferable.

Salary range: £10,220 to £12,250, entry according to qualifications and experience. Further details are available from: **Ms. S. M. Hurley, Imperial Cancer Research Fund, P.O. Box 123, Lincoln's Inn Fields, London WC2A 3PX, England; telephone: 01-242 0200, extension 305.** Please quote Reference 116/85.

The American Museum of Natural History announces a limited number of resident **RESEARCH/MUSEUM FELLOWSHIPS** available to postdoctoral researchers and established scholars starting in summer and fall 1986. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, mineral sciences, and the field of museum education as it relates to natural history museums or planetariums. Deadline for applications, including Chapman Fellowships (ornithology), is 15 January. Request information booklet and application from: **Office of Grants and Fellowships, AMERICAN MUSEUM OF NATURAL HISTORY, Central Park West at 79 Street, New York, New York 10024.** *An Equal Opportunity/Affirmative Action Institution, M/F/H.*

COURSE

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION

16 to 21 February 1986

This course will consist of lectures in methodology with comprehensive syllabus covering receptors, gene transcription, mRNA and protein synthesis, recombinant DNA, protein hormones, and cyclic nucleotides.

Co-directors: **W. T. Schrader** and **B. W. O'Malley.** Fee: \$365 (\$245—fellow).

For further information, contact:

**Bonnie Cuthbert
Department of Cell Biology
Baylor College of Medicine
Houston, Texas 77030
Telephone: 713-799-6200
Deadline—17 January 1986**

WORKSHOP

A PRACTICAL COURSE IN THE CRYSTALLIZATION OF MEMBRANE PROTEINS. Lectures and demonstrations on behavior of membrane proteins, detergents, and techniques in crystallized membrane proteins analysis; 9 to 13 December 1985 at University of Colorado, Boulder. To apply, submit a letter describing interest and experience with membrane proteins and membrane protein crystallization, and a short résumé to: **R. Stroud, S-964, Department of Biochemistry, University of California San Francisco, San Francisco, Calif. 94143-0448,** by 1 November 1985.

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON IMMUNOLOGICAL ADJUVANTS AND MODULATORS OF NONSPECIFIC RESISTANCE TO MICROBIAL INFECTIONS 30 June to 3 July 1986 Columbia, Maryland

This is a satellite symposium to the 6th International Congress of Immunology. Four invited symposia will address: (i) Immune System Targets of Immunomodulation, (ii) Adjuvant Action of Microbial Products, (iii) Synthetic Adjuvants, and (iv) Modulators of Non-Specific Resistance. Poster presentations are solicited for poster/workshops on adjuvants and immunomodulators. Attendance is limited to 450. For more information, contact: **Dr. Sherwood Reichard, Meeting Coordinator, RES Society, Medical College of Georgia, Augusta, Ga. 30912.** Telephone: 404-828-2601.

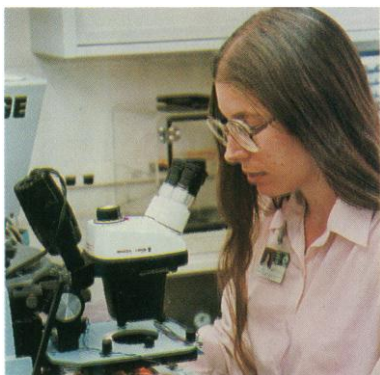


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Constant Voltage (V)*	250	25/250	1000	500	500	500
Constant Current (mA)*	100†	5000/250†	200†	400†	400†	500
Constant Power (W)*	—	—	—	—	—	—
Voltage Limit Control	—	—	—	—	—	—
IEF Endpoint Detection	—	—	—	—	Timer	—
Automatic crossover	—	—	—	—	—	—
Digital LED readout	Y	—	—	—	—	—
Large dual-range meters	—	Y	Y	Y	Y	Y
Hi-lo range switching	Y	—	Y	Y	Y	Y
Safety Interlock	—	—	Y	Y	Y	Y
Electrical Safety	Y	Y	Y	Y	Y	Y
Adapts to any cell	Y	Y	Y	Y	Y	Y
Price	\$ 225	295	495	495	595	695

FEATURE	EC350	EC400	EC500	EC300	EC555	EC600
Constant Voltage (V)*	500	1000	2000	2000	1500/500	4000
Constant Current (mA)*	100†	200	150	150	500/1500	200
Constant Power (W)*	—	200	300	30	—	200
Voltage Limit Control	—	Opt	Opt	—	—	Y
IEF Endpoint Detection	Y	—	—	Y	—	—
Automatic crossover	—	Opt	Opt	Y	—	Y
Digital LED readout	—	—	—	Y	Y	—
Large dual-range meters	—	Y	Y	—	—	Y
Hi-lo range switching	—	Y	Y	—	—	Y
Safety Interlock	Y	Y	Y	Y	Y	Y
Electrical Safety	Y	Y	Y	Y	Y	Y
Adapts to any cell	Y	Y	Y	Y	Y	Y
Price	\$ 895	995	1295	1495	1595	1995

(*)=maximum (†) not Constant

