

"Comparisons of the sizes of some major cities of antiquity." [From *The Early History of the Ancient Near East, 9000-2000 B.C.*]

descriptions repeated over and over in standard texts.

Ancient Near Eastern history is based on fragmentary archeological remains and (after about 3200 B.C.) on written sources that either cannot be read—for example, the Uruk archaic texts, the world's earliest written documents—or are in languages, such as Sumerian and Akkadian, that not infrequently are poorly understood. Evidence is seldom conclusive and differences in the interpretation of data are legitimate. As is inevitable, I and other archeologists might take issue with Nissen's emphases and specific interpretations, but I do not want to focus on differences here. I want instead to point out what I think is Nissen's most interesting and significant contribution, that is, his rich description of "Early High Civil-

ization" or early complex, urban society in southern Mesopotamia, as known from Warka (ancient Uruk). The richness of Nissen's description is due largely to his long involvement in work at Warka, his excavations at the site and survey of the area around it, as well as his analysis of the Uruk archaic texts. Using material remains and information drawn from the texts, Nissen presents a reconstruction of the economic, social, and political organization of Uruk in the late fourth and early third millennia B.C. He quite correctly challenges certain commonly accepted descriptions of early Mesopotamian society, for example, the description of the society as temple-dominated and the characterization of its leadership as theocratic. He argues that such interpretations are based, at least in part, on unverifiable and misleading descriptions of architectural remains as "temples" and on later concepts, such as the "temple city," projected backward onto earlier periods.

In his account of the period of rival city-states, Nissen follows up his description of early complex society and discusses the concept of the "temple city" in detail. The concept, namely that the city, together with its inhabitants and lands, was the property of the city god, was reconstructed, in large part, from the late Early Dynastic texts from Tello (ancient Girsu). Nissen suggests that the "temple city" was, in fact, a political development of that particular time period. It was, he argues, a state ideology formulated by particularist interests, intent on maintaining the independence of city-states in the face of attempts under way in the mid-third millennium B.C. to centralize the cities of southern Mesopotamia. The concept is thus,

in Nissen's view, inappropriate for earlier periods.

Parenthetically, in his description of Early High Civilization, Nissen provides a useful discussion of the origin of writing in the need for the administrative control of increasingly complex economic activities. In the following chapter he discusses subsequent refinements of the writing system. He neglects, however, to include in his bibliography perhaps the best description and discussion of the development of the Mesopotamian writing system, M.W. Green's "The construction and implementation of the cuneiform writing system" (*Visible Language* 15, 345-72 [1981]).

Two points regarding the general usefulness of *The Early History of the Ancient Near East* need to be emphasized. Though revised, it is not significantly updated from the German original. Archeological remains, reports on which have been published since the German edition was presumably completed and that are relevant to political organization, are not included. The book lacks, for example, references to Ubaid sites such as Tell Abada, an almost completely excavated village in the upper Diyala River valley, whose remains provide evidence for social hierarchies, or Tell Ouelli in southern Mesopotamia, a site that has pushed back the chronology of settlement on the floodplain and provided important data on the subsistence base of its Ubaid period inhabitants.

The second point concerns the translation, which is literal and inelegant. Potential readers should be aware that a knowledge of German is helpful in working through parts of the text.

In sum, Nissen has provided us with a creative and challenging overview of political evolution in an area of the world commonly referred to as the "cradle of civilization." *The Early History of the Ancient Near East* is a volume that his colleagues, whether in anthropology, history, or ancient Near Eastern studies, can profitably mine for its wealth of ideas.

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Books Received

Activation Analysis with Charged Particles. C. Vandecasteele. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1988. 171 pp., illus. \$49.95. Ellis Horwood Series in Analytical Chemistry.

Aging and the Skin. Arthur K. Balin and Albert M. Kligman, Eds. Raven, New York, 1988. xx, 372 pp., illus. \$75.

Algebraic Probability Theory. Imre Z. Ruzsa and Gábor J. Székely. Wiley, New York, 1988. xii, 251 pp., \$69.95. Wiley Series in Probability and Mathematical Statistics.

Late Uruk Period ca. 3100	Jamdet Nasr Period ca. 3000	Early Dyn. III Period ca. 2400	Ur III Period ca. 2000	Meaning
				SAG 'Head'
				NINDA 'Bread'
				KU 'to eat'
				AB 'Cow'
				APIN 'Plow'
				KI 'Place'
				'10' resp '6'
				'1'

"Development of some signs of the Babylonian cuneiform script." [From *The Early History of the Ancient Near East, 9000-2000 B.C.*]

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Biology and Biochemistry of Normal and Cancer Cell Growth. L. Castagnetta and I. Nenci, Eds. Harwood, New York, 1988. xiv, 273 pp., illus. \$124. Ettore Majorana Life Sciences Series, vol. 5. From a course, Erice, Italy, March 1987.

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Bones, Bodies, Behavior. Essays on Biological Anthropology. George W. Stocking, Jr., Ed. University of Wisconsin Press, Madison, 1988. xvii, 272 pp., illus. \$25. History of Anthropology, vol. 5.

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Chemical and Engineering Thermodynamics. Stanley I. Sandler. Wiley, New York, 1989. xxvi, 622 pp., illus., + floppy disk in pocket. \$54.92. Wiley Series in Chemical Engineering.

Chemicals in the Oil Industry. P. H. Ogden, Ed. Royal Society of Chemistry, London, 1988 (U.S. distributor, American Chemical Society, Washington, DC). x, 284 pp., illus. Paper, \$24. Special Publication no. 67. From a symposium, Manchester, U.K., April 1988.

Chemistry and Physics of Solid Surfaces VII. R. Vanselow and R. F. Howe, Eds. Springer-Verlag, New York, 1988. xviii, 616 pp., illus. \$98. Springer Series in Surface Sciences, vol. 10. From an institute, Milwaukee, WI, Aug. 1987.

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Crystal Chemistry and Refractivity. Howard W. Jaffe. Cambridge University Press, New York, 1988. xii, 335 pp., illus. \$75.

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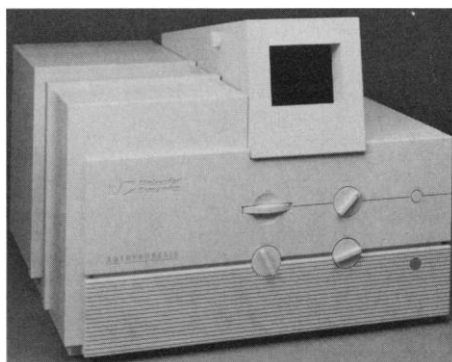
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Literature

Performance Assurance for Air Displacement Pipettes is a technical guide to getting the best performance from microliter pipetting systems. Rainin Instrument. Circle 487.

Biotechnology is a brochure about cell culture and bacterial bioreactors for biotechnology. Applikon Dependable Instruments. Circle 490.

Powerful New Problem Solving Capability for HPLC is a brochure describing polymeric columns and pulsed electrochemical detectors for high-performance liquid chromatography (HPLC). Dionex. Circle 491.

Biologics is a newsletter about applications for biochemicals, amino acids, and immunochemicals. CALBIOCHEM. Circle 492.

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To ESTIMATE ad cost:
Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines \times \$40.00 = approximate cost of ad. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

CANCELLATION POLICY:
NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005
Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc.
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Behavioral Research. Seeking position as postdoctoral, doctoral or assistant researcher. Background: M.D. with broad behavioral sciences interests. B.S., M.B.A. degrees and M.P.H. studies. Box 11332, Norfolk, VA 23517.

Biochemist, M.S. Chemistry, Ph.D. expected June 1989, seeks industrial position. Prior experience in both academic and industrial laboratories. Several publications from dissertation. Very broad biochemical, immunological, and molecular biology background. Box 55, **SCIENCE**.

Biologist, Ph.D. (April 1989). Experience in protein isolation, purification and characterization, including HPLC. Seeking challenging postdoctoral position in a laboratory with ongoing research in protein chemistry. Box 47, **SCIENCE**.

POSITIONS WANTED

Cardiovascular Physiologist, Ph.D., seeks position in academia at assistant professor level. Interest and background in cardiac function during circulatory shock, myocardial ischemia. Seven years of postdoctoral experience. Also excellent background in computers. Excellent teacher and research scientist. Curriculum vitae available on request. Will also consider industry. Prefer Chicago area but will consider other locations. Box 52, **SCIENCE**.

Community Ecologist/Entomologist. Recent Ph.D. (arthropod influences on natural ecosystems) with a background in plant ecology, biogeochemical cycling (nutrients, heavy metals, radionuclides), soil biology, statistics and population dynamics. Have 14 years of experience in terrestrial (from coastal to alpine) and wetlands ecosystems. Publications. Seeks research opportunities in university systems or private sector. Box 56, **SCIENCE**.

Human Psychophysiology, Ph.D. Research publications, teaching, and postdoctoral experience in the social, perceptual, and biological foundations of motivation and emotion. Seeks academic position offering teaching and research opportunities. Box 53, **SCIENCE**.

Immunologist, Ph.D. Highly skilled scientist with experience in cellular immunity in cancer and infectious diseases, hybridoma and monoclonal technology, and cell culture. Creative problem solver with excellent management and communication skills. Seeking position in academic medicine or biotechnology R&D. Box 57, **SCIENCE**.

Molecular Biologist—Computational Genomist, Ph.D., 1978. Established investigator in computational genomics and molecular biology. Good publications record. Considerable computer work on gene structure and evolution. Development of algorithms and software systems for analysis of genetic sequences and recombinant DNA. Currently working on application of computational genomics to the Human Genome project: gene-detection algorithms, automation in mega-base sequencing, database management systems for the analysis of global genome organization and regulation in complex organisms. Also working on computer simulations of gene evolution mechanisms. Invites consultation. Seeks laboratory director/manager position in industry or tenured faculty position in academia. Box 58, **SCIENCE**.

Science Writer/Editor for free-lance assignments. Biology degree and broad science knowledge. Research and foreign language skills. Douglas Garner, Box 7956, Austin, TX 78713-7956.

POSITIONS OPEN

ASSISTANT PROFESSOR ANIMAL SCIENCE/SWINE NUTRITION

Tenure-track position beginning 1 September 1989 is available for a Ph.D. trained in non-ruminant nutrition. The position is approximately 2/3 teaching and 1/3 research. Teaching and research will focus on improvement of swine productivity through nutrition and other areas of animal science in the candidate's interest. Closing date is 30 June 1989. Applicants should send a résumé, transcripts, and three letters of recommendation to: **Dr. Ronnie D. Green, Search Committee Chairperson, Department of Animal Science, Texas Tech University, Lubbock, TX 79409-2141.** TTU is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF PHYSIOLOGY AND PHARMACOLOGY. Tenure-track position available for 1 July 1989. Candidate should have Ph.D. and/or D.D.S., with qualifications and interest to teach dental and graduate students, and conduct research primarily in muscle/nervous system physiology (and pharmacology). Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of three references to: **Dr. Donald B. Doemling, Chairman, Department of Physiology and Pharmacology, School of Dentistry, Loyola University Medical Center, Maywood, IL 60153.** Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE DEPARTMENT OF PATHOLOGY

The Department of Pathology at the University of Pittsburgh School of Medicine has two openings at the assistant professor level for molecular biologists with a Ph.D. and postdoctoral training. A strong background in cloning and hybridization methods is desirable. Responsibilities will include the development of an independent research program, preferably in the area of HLA genetic, as well as teaching in the Department's Graduate Program. The position is available 1 July 1989. Send curriculum vitae and three references to: **Dr. Thomas J. Gill III, Chairman, c/o A. Roman-Koller, University of Pittsburgh School of Medicine, Department of Pathology, 776 Scaife Hall, Pittsburgh, PA 15261.** The University of Pittsburgh is an Equal Opportunity Employer.

ASSISTANT PROFESSOR UNIVERSITY OF MINNESOTA

The Department of Agronomy and Plant Genetics is requesting applications for a tenure-track, 12-month research and teaching position in weed ecology. Successful candidate will develop a weed ecology research program. Research will encompass weed problems in agronomic crops, emphasizing ecological principles of weed management, the development of principles of crop-weed competition, economic thresholds of weeds, and weed seed population dynamics. The individual will cooperate in developing integrated approaches to weed management that will provide environmental protection, and maintain the profitability and sustainability of farming enterprises. Collaboration research with other faculty is expected. The position involves graduate student training and graduate/undergraduate teaching in weed ecology and plant taxonomy.

Minimum qualifications include Ph.D. in a plant science by date of appointment and documented research experience in terrestrial plant ecology or weed population dynamics. Salary is commensurate with qualifications and experience. Benefits include health, dental, and faculty life/disability insurance, social security, faculty retirement (2-year waiting period), and opportunities for sabbaticals and quarter leaves. Applications close 15 June 1989. The position is available 1 July 1989, or as soon thereafter as possible. Applicants must send a résumé, all transcripts, reprints, a one- to two-page statement of interests related to this position, and have their letters of reference sent independently to: **Dr. Donald Wyse, University of Minnesota, Department of Agronomy and Plant Genetics, 411 Borlaug Hall, St. Paul, MN 55108.** All materials must be received by the closing date. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

ASSISTANT PROFESSOR, MICROSCOPIST—GENETICIST: Biology position available 1 August 1989. Temporary position contingent on funding. Responsibilities include participation in the undergraduate and graduate life science curriculum, including electron microscopy, genetics and genetic engineering. Supervision of M.S. students and development of an extramurally funded research program expected. Closing date: 28 April 1989 or until filled. Submit letter of application, résumé, official transcripts and three letters of reference to: **Biology Search Committee, School of Science and Technology, New Mexico Highlands University, Las Vegas, NM 87701.** New Mexico Highlands University is a small, state-supported university and is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. Ph.D. in physiology required. Opportunity for Chair of three-member Department. Primarily teaching cardiovascular, muscle, and 1/2 neuro physiology to freshman medical students. Assist in weekly laboratories. Emphasis on teaching excellence. Rank and salary commensurate with qualifications. Start July or sooner. Send by 8 May 1989 curriculum vitae and letter plus names, addresses, and telephone numbers of three professional references to: **Dr. E. H. Whitten, University of Health Sciences, College of Osteopathic Medicine, 2105 Independence Boulevard, Kansas City, MO 64124.** Telephone: 816-221-9698.

POSITIONS OPEN

The Department of Biology, The University of Alabama, invites applications for one or more tenure-track positions in molecular biology/molecular genetics at either the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Would also consider temporary 1-year appointments or visiting professorships. Candidates must have a Ph.D. and postdoctoral experience is preferred. Submit curriculum vitae and the names of three references by 30 May 1989 to: **John K. Hardman, Department of Biology, The University of Alabama, Box 870344, Tuscaloosa, AL 35487-0344.** The University of Alabama is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR— RADIATION ONCOLOGY

Facilities located in a new Cancer Hospital, occupying 30,000 square feet, include three Linacs, plus dedicated intraoperative Linac, hyperthermia, HD Remote After-loading, dedicated CT scanner, two simulators, conventional and two 3-D Treatment Planning Workstations. Requirements: At least 1 year of experience in clinical radiation oncology with demonstrated interest in academic medicine. Send résumé to: **Dr. Reinhard A. Gahbauer, Radiation Oncology, Ohio State University, Doan Hall N-089, 410 West 10th Avenue, Columbus, OH 43210.**

ASSOCIATE DIRECTOR FOR TECHNOLOGY TRANSFER

The University of Georgia is accepting applications for the position of Associate Director for Technology Transfer.

This position operates within the Industrial Interface Program and is responsible for marketing and licensing intellectual property generated by University research.

Applicants should have a good working knowledge of research and some business experience, preferably related to the protection and licensing of intellectual property. A working knowledge of computer science would be desirable. Submit application and résumé by 19 May 1989 to: **Dr. John Ingle, Director, Industrial Interface Program, The University of Georgia, Office of the Vice President for Research, Athens, GA 30602.** An Equal Opportunity/Affirmative Action Institution.

ASSOCIATE RESEARCH SCIENTIST. Perform research in the area of transposition and site-specific recombination of bacterial transposons in order to study and analyze the mechanisms of these processes in vivo and in vitro. Must have a Ph.D. in molecular biology or biochemistry. No specific experience required. Requires a strong background in classical and modern bacterial genetics; microbiology; protein expression and analysis; DNA sequencing and mutagenesis (including computer analysis of nucleic acid sequences); plasmid biology; and bacterial conjugation as evidenced by authored publications for scientific journals or 2 years of independent research in the discipline. Monday through Friday; 9:00 a.m. to 5:00 p.m.; \$29,300 per annum. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order #3046671.

DIRECTOR NORTHWESTERN UNIVERSITY INSTITUTE FOR NEUROSCIENCE

Applications and nominations are invited for the Directorship of the newly formed Institute for Neuroscience at Northwestern University. This is a University-wide institute whose members come from ten departments spread across four schools and several teaching hospitals. Current Institute membership exceeds 50 faculty. The Director will be expected to oversee the University-wide commitment to further expand faculty and research activities in the neurosciences. The Director will become the incumbent of an endowed Chair in Neuroscience. Candidates are expected to be internationally recognized leaders in the field of neuroscience.

Those interested should submit an up-to-date curriculum vitae along with the names of four references to:

Dr. Robert D. Goldman
Chairman
Institute for Neuroscience Search Committee
Department of Cell Biology and Anatomy
303 East Chicago Avenue
Chicago, IL 60611-3008

Northwestern University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

BIOLOGIST to plan, teach, and coordinate lectures and laboratory/demonstrations in introductory biology and to supervise teaching assistants. Ph.D. in life sciences required with strong interest and demonstrated excellence in undergraduate teaching. Nine-month tenure-track appointment at assistant/associate professor level commencing 28 August 1989. Salary competitive; excellent fringe benefits. Send curriculum vitae, transcripts, and three letters of recommendation by 31 May 1989 to: **Personnel, Jacksonville State University, Jacksonville, AL 36265.**

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

CEREBROVASCULAR RESEARCH SCIENTIST to join existing faculty in the study of the development, plasticity and pathology of neurovascular function. The successful candidate will exhibit evidence of independent research productivity and the ability to attract external funding. Applicants should have experience with pharmacological, physiological and functional methods to complement present anatomical, biochemical, and immunohistochemical techniques. Primary tenure-track appointment will be in the Department of Neurosurgery at the assistant or associate professor level. Please send curriculum vitae and have three letters of recommendation forwarded to: **Keith A. Crutcher, Ph.D., Research Division, Department of Neurosurgery, University of Cincinnati, Cincinnati, OH 45267.**

Full-time **CYTOGENETICS SPECIALIST** to conduct prenatal diagnosis that includes chromosome analysis from amniotic fluid cells, peripheral blood cells, villous chorion cells, fetus tissue culture cells using microscopy. Must perform high resolution banding technique, replication banding, fragile X analysis, R-banding using fluorescent microscopy and computer-assisted chromosome analysis. Involved in clinical aspects of molecular cytogenetics. Salary \$22,000 per year. Must have Bachelor's degree in biology and minimum of 3 years of experience in the field of cytogenetics. Send résumé to: **Georgia Department of Labor, 1275 Clarendon Avenue, Avondale Estates, GA 30002,** or to the nearest Georgia Job Service Center. Control #GA 5346447.

DIRECTOR DEPARTMENT OF BIOPHYSICS

The Johns Hopkins School of Medicine invites applications for the position of Professor and Director, Department of Biophysics. The department is expected to expand its research and research training programs. The successful candidate will have a distinguished record of scientific productivity in the field of structural biology. An earned doctorate and evidence of leadership ability are required. Interested applicants should send their curriculum vitae, bibliography and the names of three references to: **Hamilton O. Smith, M.D., Chairman of the Biophysics Search Committee, Johns Hopkins School of Medicine, Room 502A Preclinical Teaching Building, 700 North Wolfe Street, Baltimore, MD 21205.** Equal Opportunity/Affirmative Action Employer.

HOWARD UNIVERSITY DIRECTOR OF UNIVERSITY LIBRARIES

Applications are now being accepted for this position. Appointments will begin 1 July 1989. Applicants should have: an MLS degree or equivalent from an ALA-accredited institution and a second Master's degree or higher; a doctorate in an academic discipline is desirable; a minimum of 10 years of professional experience, including at least 5 years of administrative experience in a major academic library. Salary will be commensurate with qualifications and experience. Preliminary screening will begin 1 April 1989. Applications and nominations should be sent to: **Dr. William A. Sadler, Chairman, Review and Advisory Committee, Graduate School of Arts and Sciences, Office of the Dean, Howard University, Washington, DC 20059.** Applicants must include a current résumé and names, addresses, and telephone numbers of at least three references. To expedite application, three recommendation letters are to be sent directly to the above address. Howard University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ENDOWED CHAIR CANCER RESEARCH

This is a senior position for an established investigator who will conduct his/her own program of research and collaborate with other basic and clinical investigators in the new Arthur G. James Cancer Hospital and Research Institute at The Ohio State University College of Medicine.

The Wing Chair of Surgical Oncology will support a Ph.D. and/or M.D. at the associate or full professor level in the Department of Surgery whose primary interest is directed toward the development of the modern tools of cellular and molecular biology and their applications to the therapeutic treatment of cancer.

The Committee will begin reviewing nominations and applications on 1 April 1989 and continue until a candidate is chosen.

Please supply curriculum vitae and names and telephone numbers of three references: **William B. Farrar, M.D., Director, Division of Surgical Oncology, Doan Hall N-907, 410 West 10th Avenue, Columbus, OH 43210.**

The Ohio State University is an Equal Opportunity Employer.

ENVIRONMENTAL ENGINEER

Texasgulf Inc., Aurora, North Carolina, has an immediate opening for an environmental engineer. The ideal candidate will have a M.S. degree in environmental engineering or environmental science, and have an interest in dealing with groundwater studies and containment and control programs for solid and hazardous waste disposal. Primary responsibilities will include staying current on environmental agency regulations, obtaining regulatory permits and developing compliance programs. Excellent salary and benefit package. If interested, send résumé to:

Recruiting Supervisor
Texasgulf Inc.
P.O. Box 48
Aurora, NC 27806

Equal Opportunity Employer M/F.

ENVIRONMENTAL SPECIALIST IV

Palatka, Florida. Salary \$29,000, the St. Johns River Water Management District has an opening in applied riverine or estuarine ecology. Primary responsibility is to provide scientific direction in the development and implementation of a program to restore and preserve the lower basin of the St. Johns River. Bachelor's degree in the biological sciences and 7 years of experience required. Advanced degree with specialization in estuarine/riverine ecology/sediment-water column interactions preferred. Send résumé with source of ad by 15 May 1989 to: **St. Johns River Water Management District, Office of Employee Relations, P.O. Box 1429, Palatka, FL 32078-1429.**

Equal Employment Opportunity/Affirmative Action Employer/Veterans Preference.

EXPERIMENTAL PATHOLOGY

The Department of Pathology, Emory University School of Medicine, is expanding its program in experimental pathology. We seek candidates at the **ASSISTANT OR ASSOCIATE PROFESSOR** level, tenured or tenure-track to undertake research in the areas of fundamental immunobiology, autoimmunity, transplantation biology, and tumor immunology. Experience with modern techniques of molecular biology and cellular immunology would be important determining factors. The incumbent is expected to undertake an active program of research in experimental pathology. Candidates who have successfully competed for peer-reviewed grants, or have ongoing programs, which would lead to such support, will receive preference. The incumbent will be expected to participate in a program of graduate education, at the Ph.D. and/or Master's level in experimental pathology. Please send curriculum vitae and names of five references to: **Kenneth W. Sell, M.D., Ph.D., Professor and Chairman, Department of Pathology and Laboratory Medicine, 703 Woodruff Memorial Building, Atlanta, GA 30322.** Emory University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

**The Elmer V. McCollum Professor
and
Chair**

**Department of Biochemistry
The Johns Hopkins University
School of Hygiene and Public Health**

Applications and nominations are invited for the position of Chairperson of the Department of Biochemistry at the Johns Hopkins School of Hygiene and Public Health. The general research interests of the current faculty include: Biochemistry—enzyme structure and mechanisms; peptide chemistry; chromatin and nucleic acid chemistry; mechanisms of nucleic acid replication, recombination and repair; structure and function of cell surface molecules; somatic mutation and antibody diversity; cell metabolism; influence of nutrition in carcinogenesis. Biophysics—structure and interaction of biopolymers in cells; synthesis of oligo- and polynucleotides of designed structure and sequence; structure and function of the mammalian genetic apparatus; development of antiviral and chemotherapeutic agents; basic mechanisms of carcinogenesis; cellular and molecular mechanisms of aging. The Department also participates in a University-wide concerted effort in areas of macromolecular assemblies and interactions for which it has received considerable Federal and private support.

Candidates must have an outstanding record of research achievement in any area of biochemistry, biophysics or molecular biology, whether or not the area is currently represented in the Department; and the desire and ability to provide strong leadership to an already excellent, vibrant, growing department in the interdisciplinary setting of the School of Hygiene and Public Health.

Interested persons are encouraged to submit a curriculum vitae to:

Dr. Barry Zirkin
Chairman of the Biochemistry Search Committee
Division of Reproductive Biology
The Johns Hopkins School of Hygiene and Public Health
615 North Wolfe Street
Baltimore, MD 21205

The Johns Hopkins University is an Equal Opportunity employer

**SEARCH
REOPENED**

ASSOCIATE EDITOR

We're looking for a PhD molecular biologist with physiological orientation to join *Science* as an editor. The successful applicant will be able to demonstrate a broad range of interests and some experience with biochemical approaches to medical problems. Requirements include at least two or three years of post-doctoral experience and publications in the refereed literature.

Science editors have varied responsibilities in manuscript selection ranging from editing for clarity to soliciting papers. Previous editorial experience is not required. This is a full-time position in our Washington offices.

Please send resume and list of publications with cover letter and salary requirements to:

Mr. Gregory Stokes
AAAS
1333 H Street, NW
Washington, DC 20005

EOE

**Research Scientist/Immunology
FRANCE**

ROUSSEL-UCLAF is a major pharmaceutical company involved in Chemistry and Biotechnology for pharmaceutical, veterinary and agricultural activities.

The Company is seeking an immunologist for its Biotechnology Department located in suburban Paris.

The successful candidate will join a multidisciplinary group, and head a team of 2/3 technicians. The research programs of the group are focused on chemicals and cytokines with immunomodulatory properties.

Requirements include a Ph.D and 2/3 years relevant post-doctoral : international experiences would be appreciated. Enthusiasm and communication skills are important qualities. A substantial experience in cellular immunology will be determinant.

Send resume, list of publications and the names of three references in confidence n° 107/SC to Claudine MAUSHART, 35, bd des Invalides, 75007 PARIS (FRANCE).

ROUSSEL UCLAF



CURRICULUM



It's where you want to be

Virologist

The Division of Comparative Medicine at MIT is seeking a Virologist to provide diagnostic microbiology/virology support for the animal resources programs at MIT and other Boston biomedical facilities. Will actively participate in teaching and training in comparative medicine and related disciplines. Will collaborate on research emphasizing recognition and definition of infectious diseases that effect experimental results in laboratory animals.

Qualifications: Ph.D. or equivalent and 2-4 years in a postdoctoral program. Demonstrated research ability with commensurate publications.

Send resume and cover letter to: **Dr. James Fox, MIT, Division of Comparative Medicine, 37 Vassar Street, 45-106, Cambridge, MA 02139.**

MIT is an Equal Opportunity/Affirmative Action Employer
MIT is a non-smoking environment

**Massachusetts
Institute of Technology**

Genetics Institute is a company known for its innovative approach to the scientific research, development and manufacture of human therapeutic agents. The successful application of a sound business strategy in the development of our company enhances our strength and promising future in biotechnology.

Discovery Research

Several openings exist to join our research group at our Cambridge, MA location. We are looking for candidates with a BS/MS in the biological sciences and a minimum of two years' experience in any of the following areas.

**Molecular Biology
Histology
Cell Biology
Microbiology**

Interested candidates should forward a resume, in confidence, to **Susan Fletcher, Genetics Institute, 87 CambridgePark Drive, Cambridge, MA 01240.**

We offer a stimulating and dynamic work environment plus an excellent salary and comprehensive benefits package.

An Equal Opportunity Employer, M/F/H/V

Genetics Institute

ENZYMOLOGIST, MOLECULAR BIOLOGY R&D

Pharmacia P-L Biochemicals is a growing subsidiary of Pharmacia LKB Biotechnology, a world leader in biotechnology products. We are strongly committed to the development of advanced products for molecular biology research, many based on highly purified proteins. We have an immediate opening in our R&D group for an experienced enzymologist. The successful candidate should have extensive experience in the purification of "molecular biology" enzymes, preferably in a commercial setting. Experience in gene cloning and characterization would be a distinct advantage.

This position will offer you plenty of challenge and opportunity, as well as a competitive salary and benefits package. For consideration, please send your resume with salary history to:

**S. Hoist, Administrative Assistant
Pharmacia P-L Biochemicals
2202 N Bartlett Avenue
Milwaukee, Wisconsin 53202**

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



Pharmacia

Pharmacia P-L Biochemicals

Research Scientist Animal Science

Pfizer Central Research has an excellent opportunity for a creative scientist at its modern Animal Health Research facility in Terre Haute, Indiana. As a member of the anticoccidial project team, you will have an opportunity to exercise ingenuity and originality in developing and conducting basic and applied research toward the *in vivo* evaluation of potential anticoccidial agents.

We are seeking an accomplished scientist who is innovative, enthusiastic, has good communication skills and enjoys working as part of a strong multidisciplinary project team. You must possess a PhD in Animal Science - Poultry Science. Postdoctoral experience would be an asset; however, educational training, intellectual capabilities and leadership traits are most important.

Pfizer provides an outstanding opportunity for professional recognition and career growth. We offer excellent compensation, comprehensive benefits and relocation assistance. Qualified applicants should submit a current resume with names of three references to: Ms. Christina Batjer, Senior Personnel Supervisor, Pfizer Inc., P.O. Box 88, Terre Haute, IN 47808. An equal opportunity employer.



POSTDOCTORAL RESEARCHERS

The "Biomolecular Mechanisms" section of the Los Alamos National Laboratory has openings for postdoctoral fellows. Research conducted in this program includes:

- 1) Studies on the vertebrate rod, a single photon detector that can regulate its sensitivity over a wide dynamic range. We are examining the fine control of those gene products which regulate the photon-sensitive membrane current in this photoreceptor cell.
- 2) Studies on the microangiopathy of diabetes, a primary cause of human blindness and renal failure. We are examining the regulation of sodium transport and cell volume in mammalian erythrocytes and the reversible impairment of Na^+ transport and red cell swelling found in hyperglycemic states.
- 3) The differential excretion of glycated and unmodified albumins by the mammalian nephron is correlated with age. We are examining age related changes in the biochemical composition and physical properties of selected basement membrane structures.

Applicants should have a strong background in protein chemistry and enzyme regulation, a doctoral degree obtained in the past three years, and must qualify for a Department of Energy "Q" security clearance. Postdoctoral appointments are for one year, renewable for a second year. The salary range is \$33,640 - \$35,445 per year. Please send a curriculum vitae to Dr. Mark W. Bitensky, Senior Fellow, ADR, MS D434, Los Alamos National Laboratory, Los Alamos, NM 87545. (505) 667-9420.

To apply formally, send resume, employment application, graduate and undergraduate transcripts, and three letters of reference to Carol M. Rich, Human Resources Development Division, PD-89-059, Los Alamos National Laboratory, Los Alamos, NM 87545.

Affirmative Action/Equal Opportunity Employer

University of California

Los Alamos

Cardiovascular Research

G.D. Searle, a worldwide leader in the pharmaceutical industry, has immediate openings for the following laboratory professionals to work in the Department of Cardiovascular Diseases Research. Successful candidates will participate in basic and applied research programs directed toward the discovery of novel cardiovascular therapeutic agents.

PHD PHARMACOLOGIST - Requires 2 or more years experience in cardiovascular research with demonstrated record of scientific achievement. Position requires basic research skills as well as ability to function on a drug development team. Basic areas of research activities include hypertension, congestive heart failure and renal failure.

PHD-PHARMACOLOGIST - POST-DOCTORAL POSITION in cardiovascular research. Opportunity to work in environment that combines basic research, ranging from molecular biology to whole animal pharmacology, and team approach to drug discovery.

BS/MS BIOCHEMIST - Requires BS/MS in biochemistry, pharmacology or biology with a minimum of 3 years laboratory experience; previous experience in receptor binding methodology is preferred. Experience in several of the following areas is desirable; enzyme assays, column chromatography, electrophoresis, immunoassays. Responsibilities will include investigating the receptor binding properties of novel compounds in addition to carrying out biochemical studies aimed at obtaining a greater understanding of receptor-ligand interactions. Good oral and written communication skills are necessary.

The above positions are available at the St. Louis site of G.D. Searle R&D in the newly built, modern Life Sciences research facility. This offers a unique opportunity to interact with a multidisciplinary team of scientists in a stimulating research environment. G.D. Searle & Company, a wholly owned subsidiary of Monsanto Company, offers competitive salary and benefits plans. Qualified applicants should send resumes in confidence to: **Joan M. Lineberry - GMO; G.D. Searle & Company; Monsanto Life Sciences Research Center-BB4E; 700 Chesterfield Village Parkway; St. Louis, MO 63198.** An Equal Opportunity Employer.

SEARLE

POSITIONS OPEN

FACULTY POSITION AVAILABLE THE UNIVERSITY OF PITTSBURGH DEPARTMENT OF CRYSTALLOGRAPHY

Applications are invited for a tenure-stream junior faculty appointment in the Department of Crystallography. The appointee is expected to develop a strong research program involving methodological or other new crystallographic approaches to structural problems important in the biological, physicochemical, or materials sciences. Applications, including curriculum vitae and a statement of research interests, should be sent to: **Professor B. M. Craven, Department of Crystallography, University of Pittsburgh, Pittsburgh, PA 15260.** The University of Pittsburgh is an Equal Opportunity Employer. Applications from women and members of racial minorities are especially encouraged.

FACULTY POSITION TUMOR IMMUNOLOGY

The Division of Oncology, Thomas Jefferson University, has a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level available for September 1989. Candidates should have a Ph.D. or an M.D. with Board-eligibility in medical oncology, and have an active research program in tumor immunology or tumor antigen immunochimistry. Send curriculum vitae and a brief description of research interests to: **Dr. Michael J. Mastrangelo, Division of Medical Oncology, Thomas Jefferson University, 1015 Walnut Street, Suite 1005, Philadelphia, PA 19107.** Equal Opportunity Employer.

Medical College Department of Microbiology and Immunology positions available with suitable experience and background in immunology and/or virology. (i) Tenure-track position for **ASSISTANT/ASSOCIATE PROFESSOR**, (ii) several positions for research grant supported **RESEARCH ASSISTANT PROFESSORS** and (iii) **RESEARCH ASSOCIATES OR POSTDOCTORAL FELLOWSHIPS**. Send by 15 May 1989 a letter of interest, a current curriculum vitae and names of at least three references to: **Dr. Herman Friedman, Professor and Chairman, Department of Medical Microbiology and Immunology, University of South Florida, College of Medicine, 12901 Bruce B. Downs Boulevard, Tampa, FL 33612.** According to Florida law, applications and meetings regarding the same are open to the public. USF is an Affirmative Action/Equal Employment Opportunity Employer.

IMAGE ANALYSIS SYSTEM RESEARCH ASSOCIATE

The Department of Physiology, Morehouse School of Medicine, is seeking a mature individual to manage a multi-user SUN-based Image Analysis facility. Background in cell biology with programming experience in UNIX is required; in fluorescence microscopy and video technology highly desirable; in computer interfacing and networking desirable. Salary commensurate with qualifications and experience. Position available immediately. Qualified applicants should submit curriculum vitae to:

**Dr. Catherine Chew
Department of Physiology
Morehouse School of Medicine
720 Westview Drive, SW
Atlanta, GA 30310**

Morehouse School of Medicine is an Affirmative Action/Equal Opportunity Employer.

IMMUNOLOGIST. The Baptist Medical Centers, Department of Research, has an immediate opening for an established investigator with a Ph.D. and/or M.D. and proven funding in a clinically relevant area of immunology. Areas of research include, but are not limited to, tumor, transplantation, or nutritional immunology, and immunotherapeutics or diagnostics. The position offers an exciting opportunity for an industrious scientist with a broad knowledge of immunology to establish and direct an immunology program blending basic and clinical research in a hospital setting. Salary commensurate with experience and qualifications. Generous benefits package. Qualified applicants should send curriculum vitae and names of three references by 1 June 1989 to: **David A. Otto, Ph.D., c/o The Baptist Medical Centers, Human Resources Department, P.O. Box 830605, Birmingham, AL 35283-0605.** The Baptist Medical Centers is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

IN VIVO NMR SPECTROSCOPY. The Department of Radiology of the University of Iowa, College of Medicine, invites applications for a position in NMR spectroscopy. The University Hospital has a 1.5 T whole body MR system with spectroscopic capabilities and has initiated research aimed towards eventual clinical application of in vivo MR spectroscopy. The successful candidate will develop an active research program and collaborate with other investigators. A Ph.D. in chemistry, biochemistry, or related field is required. Experience with in vivo NMR is preferred. Academic rank commensurate with experience. Contact: **E. A. Franken, Jr., M.D., Professor and Head, Department of Radiology, University of Iowa, Iowa City, IA 52242.** Women and members of minority groups are encouraged to apply. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.

INSTRUCTOR—The University of Texas Southwestern Medical Center at Dallas has an opening at level of instructor. Successful candidates should have Ph.D. in biochemistry and strong background in chemistry with minimum of 5 years of experience in lipid chemistry and biochemistry. Preference will be given to candidates with experience in phospholipid biochemistry and phospholipid metabolism. Lipid extraction, thin-layer chromatography and capillary gas chromatography are essential requirements; familiarity with methods of enzymology and radioisotope labelling and high pressure liquid chromatography are also highly desirable. Responsibility will include laboratory aspects of a research project dealing with need for omega-3 fatty acids for normal development in the human, including fatty acid analysis of plasma and red blood cell membranes, lipid subclasses. Send curriculum vitae and three letters of reference by 15 May 1989 to: **Ricardo Uauy, M.D., Ph.D., Department of Pediatrics, 5323 Harry Hines Boulevard, Dallas, TX 75235-9063.** Affirmative Action/Equal Opportunity Employer.

University seeks **INSTRUCTOR OF BIOCHEMISTRY**. Will be responsible for teaching graduate students in laboratory techniques and lectures on topography of post-translational modifications of proteins (i.e. glycosylation, phosphorylation) in the endoplasmic reticulum and Golgi apparatus of higher and lower eukaryotes. Must have research experience in these subjects and be able to conduct independent research in them. Approaches should include biochemistry, cell biology, and genetics. Ph.D. in biological science is required. Send letter and curriculum vitae before 15 June 1989 to: **Chair, Instructor Search Committee, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.** Affirmative Action/Equal Opportunity Employer.

JUNIOR FACULTY POSITION available in the pharmacology and biochemistry of antineoplastic agents targeted against specific human cancer types. Studies will involve the modulation of anticancer agents with thymidylate synthase as the primary target. The focus will be on metabolism of reduced folates, modulation of reduced folate pools, and optimization of drug scheduling for therapeutic gain. Research will also identify factors that influence the regulation and turnover of thymidylate synthase in elucidating the importance of the enzyme as a therapeutic target. Candidates should have the Ph.D. degree with a minimum of 3 years of postdoctoral experience. A strong background in biochemistry is advantageous. Send curriculum vitae and names of three references to: **Dr. J. A. Houghton, Laboratories for Developmental Therapeutics, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** Equal Opportunity/Affirmative Action Employer.

MANAGER, VIRUS PRODUCTION

Ambico, Inc., a rapidly growing veterinary biotechnology company, located just outside Des Moines, Iowa, is seeking a manager for its Virus Production Department. We will consider candidates with a Master's Degree and at least 3 to 5 years of work experience in cell culture methodology and virology. Responsibilities will also include certain developmental activities in collaboration with our research department. This is an excellent growth opportunity for the right individual. Please send résumé to: **Human Resources, Ambico, Inc., Box 522, Dallas Center, IA 50063.**

POSITIONS OPEN

MAGNETIC RESONANCE SPECTROSCOPIST. Applications are invited for a non-tenure-track position as research assistant professor in the Department of Biochemistry, University of Virginia. Applicants for this position must be expert in the theory of magnetic resonance spectroscopy and in the application of these techniques to lipid bilayers and biological membranes. They must also have extensive experience in the synthesis of phospho- and sphingolipids and other complex membrane lipids. The position will require advanced graduate-level teaching of the theory and applications of magnetic resonance spectroscopy. Applicants must hold a Ph.D. degree and have at least 4 years of postdoctoral research experience. Curriculum vitae, copies of academic transcripts and three letters of recommendation should be sent to: **Professor T. E. Thompson, Department of Biochemistry, The University of Virginia, Charlottesville, VA 22908.** Applications should be postmarked on or before 11 May 1989. Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGIST, a junior level research position in our Department of Physiology and Medicine. We are seeking a scientist with research background in molecular biology and an interest in cell differentiation. Candidates should have a Ph.D., M.D., or D.V.M. degree with accomplishments that demonstrate the ability to maintain an independent research program. The appointee will complement the current research in neonatal pulmonary disease conducted by **Dr. Robert A. deLemos** of this institution and **Drs. Richard J. King and Jacqueline J. Coalson** of The University of Texas Health Science Center at San Antonio. The program focuses on the physiologic and molecular bases of chronic lung disease.

The Southwest Foundation for Biomedical Research is a nonprofit, private research institution with a staff of 45 scientists and facilities for DNA sequencing, oligonucleotide and peptide synthesis, hybridomas, electron microscopy, flow cytometry and computer modeling. It also has extensive nonhuman primate resources which include baboons, rhesus monkeys, and chimpanzees.

Interested candidates should mail curriculum vitae, brief summary of research goals, and names and telephone numbers of three references to: **Personnel Director (29), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** Equal Opportunity Employer M/F.

The Section of Endocrinology at the VA Hospital of the Indiana University Medical Center seeks **MOLECULAR BIOLOGIST** (Ph.D./M.D.) for a position as postdoctoral fellow, assistant scientist or assistant professor depending upon previous training and experience. Excellent advancement and career opportunities with competitive salary. Applicant would interface with scientists actively studying the molecular and cellular biology of Vitamin D and insulin hormone action. Please send résumé, letter describing research experience, and two letters of recommendation to: **Drs. S. Manolagas and T. Garvey, Section of Endocrinology and Metabolism, VA Medical Center (111E), 1481 West 10th Street, Indianapolis, IN 46202.**

MOLECULAR BIOLOGY/IMMUNOLOGY

POSTDOCTORAL ASSOCIATE to collaborate on design and use of molecular labels for antigen-specific T cells to be used to examine interaction of T cells with antigen in vitro and in vivo. Available July 1989. Please send curriculum vitae, statement of research interests, and names and telephone numbers of three references to: **Robert B. Fritz, Ph.D., Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.**

MOLECULAR NEUROBIOLOGY AT McMASTER UNIVERSITY. The Department of Biomedical Sciences invites applications for **TENURE-TRACK POSITIONS** (Ph.D. or M.D.). The existing strengths of the Department are in nerve growth and regeneration, neurotransmitters and receptors, smooth muscle and vision. Applications, together with curriculum vitae and names and addresses of three referees, should be sent before 30 June 1989 to: **Dr. A. J. McComas, Department of Biomedical Sciences, McMaster University, 1200 Main Street West, Hamilton, Ontario, Canada, L8N 3Z5.** Preference will be given to Canadian citizens and permanent residents in Canada.



Public Service Commission
of Canada

Commission de la fonction
publique du Canada

Biologists (BI-04)

Health and Welfare Canada
Health Protection Branch
Ottawa, Ontario

The Bureau of Biologics requires two experienced scientific professionals to head two different areas within the Bureau.

Bacterial Antigens and Antisera Section

Reference number: S-88-31-8119-47JG-G35

As a Biologist with the Bureau, you will direct the activities of this Section. This involves regulatory control testing and evaluation of the safety and efficacy of various bacterial vaccines and antisera, as well as other biological drugs prepared with biotechnology for human use in the prevention and treatment of diseases. You will also direct and coordinate development research programs on the above-mentioned drugs.

Requirements include graduation with a doctoral degree from a recognized university in a biological science or a lesser degree with evidence of research experience. You must also possess laboratory and research experience in microbiology, molecular biology and immunology. Knowledge of English is essential.

Immunology Section

Reference number: S-89-31-5221-47JG-G35

As a Biologist with the Bureau, you will oversee the activities of this section. Such a responsibility involves regulatory control testing and evaluation of the safety and efficacy of various biological drugs (hormones, enzymes, allergenic products) prepared by different production methods including biotechnology. We will rely on you to act as a consultant in the appraisal and evaluation of new drug submissions and to evaluate operating procedures of Canadian and foreign pharmaceutical manufacturers. You will also direct and coordinate development research programs on the above-mentioned drugs.

Education includes graduation with a doctoral degree from a recognized university in a biological science or a lesser degree with evidence of research experience. You must also possess laboratory and research experience in biochemistry and immunology. Experience in molecular biology and microbiology would be a definite asset. Knowledge of English is essential.

We offer a salary ranging from \$48,139 to \$55,591 commensurate with your qualifications and experience.

Please forward your résumé and/or application form, quoting the appropriate reference number to:
***Joan Girling, (613) 996-8054, Public Service Commission of Canada, National Capital Region,
171 Slater Street, Ottawa, Ontario K1A 0M7.***

Closing Date: 31 May 1989

Canada

Public Service Commission of Canada is an equal opportunity employer

RESEARCH ASSOCIATES MOLECULAR BIOLOGY

Amgen, an industry leader in advanced biotechnology, develops products for a wide variety of applications. Recent progress has created an opportunity for a BS or MS scientist to contribute to on-going research efforts in molecular biology.

Qualified applicants should have a BS or MS in Molecular Biology, Biochemistry or a related discipline and 2-4 years of experience in Prokaryotic Molecular Biology or Molecular Genetics. Experience with basic molecular biological techniques such as library construction, vector construction, immunoblot analysis and enzyme assays is essential. Familiarity with Gram positive organisms is highly desirable.

Amgen offers a stimulating and challenging research environment as well as an attractive location one hour northwest of Los Angeles. Amgen also offers an excellent compensation and benefits package. Qualified applicants should send a resume and a list of 3 references, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #391
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

CIBA-GEIGY RESEARCH PROFESSORSHIP IN NEURODEGENERATIVE DISEASES

LOCATION:

McMaster University Faculty of Health Sciences with primary appointment in the Department of Medicine, Psychiatry, Clinical Epidemiology and Biostatistics, or Biomedical Sciences.

RANK: Associate or Full Professor

QUALIFICATIONS:

Qualifications for this job will include an MD with subsequent specialty qualifications in psychiatry, internal medicine, clinical pharmacology, or clinical epidemiology, or completion of a postgraduate degree in a relevant biomedical science. Under exceptional circumstances, applications from non-MD scientists will be considered. The successful candidate will be an established independent investigator with an interest in the investigation and/or treatment of neurodegenerative diseases with cognitive impairment. The successful candidate will have an opportunity to work as part of a multi-disciplinary group focused on the pharmacologic treatment of neurodegenerative diseases, and must have a proven record of success in a multi-disciplinary research programme. Expertise in the evaluation of methods applied to neuro-cognitive assessment would be especially valuable.

SALARY:

Salary will be appropriate to experience, rank, and involvement in clinical activities.

CLOSING DATE: June 30, 1989

Interested applicants should apply in writing, enclosing a curriculum vitae with the names and addresses of three referees to: **DR. STUART M. MacLEOD, DEAN, FACULTY OF HEALTH SCIENCES, MCMASTER UNIVERSITY, 1200 MAIN STREET WEST, HAMILTON, ONTARIO L8N 3Z5**

In accordance with immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

BIOTECHNICAL/RESEARCH OPPORTUNITIES

Interferon Sciences, Inc. is a growing biotechnology company located at the heart of the pharmaceutical industry in central New Jersey. Applications are invited at all degree levels for R & D positions in the following areas:

Immunochemistry/Hybridoma

Immunochemist with experience in immunoassay development and production and purification of monoclonal and polyclonal antibodies (RD101).

Protein Biochemistry

Biochemist with experience in purification and characterization of proteins, affinity chromatography, and product development (RD102).

Cell Biology

Biologist with experience in mammalian cell culture and cytokine assay development (RD103).

Molecular Genetics

Molecular biologist with experience in cDNA cloning, DNA sequencing, vector construction, gene expression and in vitro mutagenesis (RD104).



INTERFERON SCIENCES, INC.

783 Jersey Avenue
New Brunswick, NJ 08901

An Equal Opportunity Employer M/F

DEAN GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

As part of a plan to enhance its effectiveness and impact as a major research center, The University of Medicine and Dentistry of New Jersey seeks an accomplished Scientist as Dean of its Graduate School of Biomedical Sciences. The Graduate School consists of 14 departments on two campuses offering programs leading to the Ph.D., M.D./Ph.D. and D.M.D./Ph.D.

The successful candidate will have a Doctoral degree in an appropriate discipline plus a track record of substantial research activity sufficient for appointment as a tenured Professor. Administrative experience is desirable.

Review of applications will begin immediately. The University will continue to accept applications until the position is filled. Applicants should send a complete curriculum vitae and a brief letter of interest to: **Harvey Ozer, M.D., Search Committee Chair, Chairman, Department of Microbiology and Molecular Genetics, UMDNJ-New Jersey Medical School, (S), 185 South Orange Avenue, Newark, NJ 07103-2757.**

The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer M/F/H/V.

UMDNJ
NEW JERSEY

O V E R S E A S LIAISON SCIENTIST POSITIONS TOKYO, JAPAN

The Office of Naval Research, the Air Force Office of Scientific Research, and the Army Research Office are jointly soliciting letters of interest and resumes from qualified candidates to fill liaison scientist positions in their combined office in Tokyo. Candidates are sought who are US citizens, are currently research scientists or research engineers and who have a Ph.D. or equivalent experience in physical, environmental, engineering, or life sciences. In general, preference is given to candidates from the academic or government sectors. Knowledge of DOD R&D activities; relevant, established foreign contacts; and stature in the international R&D community are highly desirable features of an applicant's background.

Generally, up to 2-year assignments are available for coverage of the following fields (periods are somewhat negotiable):

Computer Science (continuing requirement)
Electro-optics/lasers
Materials/composites/ceramics
Chemistry/polymers
Biotechnology
Solid State Electronics
Manufacturing Science
Statistics/Applied Math

Liaison scientists survey research in selected areas of importance to current or potential R&D interests of the sponsoring offices. They interact with foreign scientists via personal contacts and attendance at meetings and write interpretive reports of their survey efforts.

Candidates should send letters of interest (indicating dates of availability) and resumes to:

Ms. Pearl Cano
Office of Naval Research
International Programs (Code 11D5)
Arlington, Virginia 22217-5000



GLAXO INSTITUTE FOR MOLECULAR BIOLOGY S.A.

The Geneva biotechnology research unit of the largest U.K. pharmaceutical group has a vacancy for a

Biochemist

to investigate

**membrane receptors
signal transduction mechanisms**

The Glaxo Institute for Molecular Biology applies a molecular approach to the discovery of effective new medicines. Projects include inflammatory diseases, viral therapeutics, neurobiochemistry and the regulation of cell proliferation and differentiation.

The Institute has a staff of over 120 people, grouped in small teams of specialists from several domains of modern biology. We are part of the Glaxo Group, which has an outstanding reputation for the quality of its research and products. We offer an excellent salary and benefits package, an interactive research environment, and opportunities for career development in one of the most attractive parts of Europe.

The ideal candidate will have several years of postdoctoral research experience and a proven track record in the field of membrane receptors or signal transduction mechanisms. Experience with animal cell cultures would be an advantage.

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of three references to: Rita Gloor, Personnel Manager, GLAXO IMB SA, 46, route des Acacias, 1211 Geneva 24, Switzerland.

POSITIONS OPEN

MOLECULAR NEUROBIOLOGY NATIONAL INSTITUTE FOR DRUG ABUSE (NIDA) TENURE-TRACK AND FELLOWSHIP POSITIONS

The Addiction Research Center (ARC), NIDA, wishes to enhance its programs in molecular neurobiology. Current efforts center on cloning and assessment of regulated expression of genes relevant to neurotransmission and drug abuse, and solubilization and purification of drug receptors. Applicants for postdoctoral fellowship and tenure-track positions, preferably with expertise in molecular biology and/or molecular neurobiology should apply to: **Dr. George Uhl, Laboratories of Molecular Neurobiology, ARC/NIDA, Box 5180, Baltimore, MD 21224.** Federal Government is an Equal Opportunity Employer.

NEUROBIOLOGIST/NEUROETHOLOGIST COLORADO STATE UNIVERSITY

Applications and nominations are solicited for a neurobiologist/neuroethologist position at the assistant professor level. We seek an individual who is conducting research on the cellular and/or molecular basis of behavior. Postdoctoral experience is preferred. The tenure-track appointment will be in the biology department, and the individual will be expected to participate in the University-wide Program in Neuronal Growth and Development. The successful candidate will be expected to maintain an extramurally funded research program, teach an introductory course in biology, and develop a course in his/her specialty. Applications should include curriculum vitae, selected reprints, brief statement of research plans and teaching interests, and three letters of recommendation. Deadline is 31 July 1989. Search may be continued if a suitable candidate is not found. Starting date: January, or later, 1990. Applications and nominations should be sent to: **Dr. Philip N. Lehner, Chair, Search Committee, Department of Biology, Colorado State University, Fort Collins, CO 80523.** CSU is an Affirmative Action/Equal Opportunity Employer. EO Office: 314 Student Services Building.

NEUROTOXICOLOGY POSTDOCTORAL RESEARCH ASSOCIATE POSITION to study xenobiotic-induced neuronal injury associated with alterations in intracellular ionic homeostasis. Techniques to be used include intracellular fluorescence probes, cell culture and single cell confocal microscopy. Experience in biochemical techniques and/or cell culture desired. Starting salary is \$20,000 per year. Send curriculum vitae and three letters of reference to: **Dr. Gary E. Isom, Department of Pharmacology and Toxicology, Purdue University, West Lafayette, IN 47907.** Equal Opportunity/Affirmative Action Employer.

The Department of Pediatrics at the University of Michigan is seeking Board eligible/certified **PEDIATRIC HEMATOLOGIST/ONCOLOGISTS.** Duties include patient care, teaching and research activities. The University of Michigan is an Equal Opportunity/Affirmative Action Employer. If interested, please send curriculum vitae to: **Laurence A. Boxer, M.D., Director, Pediatric Hematology/Oncology Division, F6515 C. S. Mott Children's Hospital, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0238.**

PHYSIOLOGIST: Position open for general physiologist. Primary responsibilities: not more than 20% of time teaching medical physiology to medical students, and at least 80% of time for research. Please send curriculum vitae detailing teaching experience, research interests, grant track record and the names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568.** Affirmative Action/Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY

Postdoctoral position, available June 1989 for mutational analysis of regulatory sequences in plant seed-specific genes. A Ph.D. in plant molecular biology, biochemistry, genetics, or with experience in recombinant DNA technique preferred. Salary \$24,000 per year. Send résumé to: **Dr. Norimoto Murai, Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge, LA 70803.** Telephone: 504-388-1380. An Equal Opportunity Employer.

POSITIONS OPEN

PLANT ECOLOGIST. Tenure-track assistant professor to join active program in ecology and environmental biology. Available August 1989. Research area open; wetlands ecologist preferred. Responsibilities include teaching ecology, botany, and courses in area of specialty, and maintaining an active research program involving graduate students. Ph.D. required; postdoctoral experience preferred. Send curriculum vitae, unofficial transcripts, and names and telephone numbers of at least three references by 29 May 1989 to: **Dr. Gary Childers, Department of Biological Sciences, Southeastern Louisiana University, Box 814, Hammond, LA 70402.**

POLYMER SCIENCE AND ENGINEERING UNIVERSITY OF MASSACHUSETTS

Applications and nominations are invited for a tenure-track faculty appointment at the **ASSISTANT PROFESSOR** level in the Department of Polymer Science and Engineering to begin September 1989. Candidates must have an earned doctorate and a strong commitment to research and teaching excellence. Salary commensurate with qualifications and experience. Applicants should submit curriculum vitae and an outline of research plans, and arrange for three letters of reference to be sent to: **Professor Frank E. Karasz, Search Committee Chairman, Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003.** Closing date 15 May 1989. The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF MINNESOTA DEPARTMENT OF PHARMACOLOGY POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS

The Department of Pharmacology, University of Minnesota Medical School, has postdoctoral and research associate positions available in several fields. Our faculty members are well-funded and direct strong interdisciplinary research programs.

Positions are open to applicants upon receipt of a Ph.D. degree.

Areas of emphasis include:

Molecular biology, biochemistry, immunology, and neurobiology-neurochemistry

Molecular cloning, opioid receptor, receptor, and chemical biochemistry

Intracellular electrophysiology, ion channels

Drug abuse, neuropharmacology

Biochemical/molecular pharmacology

Cancer chemotherapy, immunopharmacology, drug metabolism, enzymology, and anti-viral drugs

Interested applicants should send curriculum vitae, statement of research interests, and the names of three references to: **Dr. Horace H. Loh, Professor and Head, Department of Pharmacology, 3-249 Millard Hall, 435 Delaware Street SE, Minneapolis, MN 55455.**

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

POSTDOCTORAL ASSOCIATE

Postdoctoral associate to research cellular and molecular mechanisms of cookability loss in legume seeds during storage. Earned Ph.D. degree in a field related to the biochemistry of plant cells and experience in biopolymer isolation/characterization (e.g. HPLC, IF, PAGE) and in SEM techniques necessary. Send résumé, transcripts, and three letters of recommendation to: **Dr. R. Dixon Phillips, Department of Food Science and Technology, University of Georgia Agricultural Experiment Station, Griffin, GA 30223-1797.** Deadline for receipt of application is 15 June 1989. The University of Georgia is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITION. Brigham and Women's Hospital, Harvard Medical School seek Ph.D., M.D. or M.D., Ph.D. candidate for current position with potential for advancement. Ongoing projects involve the molecular basis for the regulation of expression of hypothalamic and adrenal genes by steroids and second messenger systems. Send curriculum vitae, letter of interest and references to: **Gail Adler, M.D., Ph.D., Endocrinology-Hypertension Division, 221 Longwood Avenue, Boston, MA 02115.**

POSITIONS OPEN

POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS MOLECULAR VIROLOGY/BIOLOGY

Postdoctoral and research associate positions are available (beginning Summer 1989) to participate in ongoing research on the molecular biology, virology, and pathogenesis of the simian and feline immunodeficiency viruses (SIV and FIV). The applicant would be a member of an NIH-funded multidisciplinary group developing animal models for AIDS. Newly constructed laboratory space (including BL-3 facilities) is available and is equipped with state-of-the-art instrumentation (including DNA synthesizer, automated DNA sequencer, PCR cyclers, etc.). Applicants should possess a Ph.D., M.D., or D.V.M. degree and have demonstrated skills in basic molecular biology techniques. Salary will be commensurate with experience and expertise. Interested candidates should send curriculum vitae and the names of three references to:

Dr. Philip R. Johnson
Division of Molecular Virology and Immunology
Department of Microbiology
Georgetown University School of Medicine
NIH/Twinbrook II
12441 Parklawn Drive
Rockville, MD 20852

Georgetown University is an Equal Opportunity/
Affirmative Action Employer.

POSTDOCTORAL ASSOCIATE position(s) available in a neuroscience laboratory which studies neurotransmitter release due to pain and analgesia, especially with respect to substance P and excitatory amino acids. Experience doing HPLC, receptor binding or in vivo microdialysis is desirable. Ph.D. in biological sciences required. Send curriculum vitae by 15 May 1989 to: **Alice A. Larson, Ph.D., Department of Veterinary Biology, University of Minnesota, 1988 Fitch Avenue, St. Paul, MN 55108.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

POSTDOCTORAL FELLOW. Department of Microbiology and Immunology, Stanford University, Stanford, California. Position available immediately to study human papillomavirus gene expression in human cervical tissues and in cultivated mammalian cells. Previous experience with these or related viral agents and a doctorate degree (M.D. or Ph.D.) is required. Support is for 2 to 3 years. Please send curriculum vitae, bibliography, and the names and addresses of three references to: **Dr. Joel Palefsky, c/o Dr. Gary K. Schoolnik, Howard Hughes Medical Institute, Beckman Center, Room 241A, Stanford University School of Medicine, Stanford, CA 94305-5425.**

TWO POSTDOCTORAL FELLOWS RESEARCH ASSOCIATES GEORGETOWN UNIVERSITY, WASHINGTON, D.C.

Two positions are available in well-funded laboratory to study the structure and function of complement proteins and of antibody immunoconjugates. One position requires background in carbohydrate or glycoprotein chemistry, the other position in protein chemistry and/or tissue culture. Applicants with prior experience may obtain research faculty appointment. Salary is competitive. Positions are available immediately. Please send curriculum vitae to: **Dr. Carl-Wilhelm Vogel, Department of Biochemistry, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, DC 20007.** Georgetown University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP—Individual will initiate studies of anticancer agents in patients, animals, and in vitro models in research-oriented networked computerized clinical chemistry laboratory. Position involves interaction with physicians/scientists in major research programs and extensive core facilities. Expected to participate in design and execution of clinical protocols and experiments, publish and present results, and train in clinical chemistry. Send curriculum vitae to: **Marshall Goren, M.D., St. Jude Children's Research Hospital, P.O. Box 318, Memphis, TN 38101.** Telephone: 901-522-0367. Equal Opportunity Employer/Affirmative Action Employer.

unifob



A RESEARCH FOUNDATION AFFILIATED TO THE
UNIVERSITY OF BERGEN

DIRECTOR, INTERNATIONAL CENTRE FOR BIRTH DEFECTS

The International Clearinghouse for Birth Defects Monitoring Systems, affiliated with WHO as a non-governmental organization, the National Institute of Public Health, Norway, and the University of Bergen Norway are establishing an International Centre for Birth Defects, to be located at the University of Bergen. Funding for an initial three years period is provided by the Norwegian government. The purpose of the Centre is

- to co-ordinate the surveillance activities of the Clearinghouse including the definition and implementation of criteria, standards and methods
- to promote, co-ordinate and undertake collaborative research among the Clearinghouse member programmes, and
- to develop and conduct training programmes for the staff of the member programmes.

The Director reports to the Board, consisting of representatives of the founding parties. The Director organizes, conducts and supervises all activities and functions of the Centre.

High scientific epidemiological qualifications are required, and preference will be given to applicants with experience in the clinical and epidemiological aspects of birth defects. Ability to work effectively in a collaborative environment is essential. Skill in written and oral communication in the English language is necessary.

Salary commensurate with training and experience. A faculty position at the University of Bergen may be established.

The position will be extended beyond the three years period provided an extended or permanent funding of the Centre.

Further information may be obtained from Professor Lorentz M Irgens, Medical Birth Registry of Norway, The Armauer Hansen Building, MFH, Haukeland Hospital, N-5021 Bergen Norway, telephone 5 974667.

Letters of application including curriculum vitae, and bibliography, should be sent to the Faculty of Medicine, University of Bergen N-5027 Bergen Norway, from where a further written description of the post may be obtained, within May 5th, 1989.

Research Scientists

Triton Biosciences Inc., a subsidiary of Shell Oil Company located in the San Francisco Bay Area, is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the areas of cancer, AIDS and other serious diseases. We currently have the following openings.

Bioassay

Experienced researcher to develop sensitive bioassays for proteins in support of process and product development activities and final product release. You should have a PhD in Biochemistry, Microbiology or Immunology and 3 or more years of experience with assay development, including direct experience in receptor binding, growth inhibition, antivirals, enzymes and bioassays. Reply to Job #89008.

Molecular Immunology

You should have a PhD in Immunology or Biochemistry with experience in the immunological and molecular characterization of protein antigens. Background in tumor markers, cancer immunology and immunoassay development required. Reply to Job #RW.

New Cancer Markers

You should have a PhD in Biological Sciences with equivalent expertise in cancer biology. Duties include effective interaction with multidisciplinary team in evaluating new cancer markers for diagnostic use. Reply to Job #YT.

Research Associate Hybridoma Development

You will perform monoclonal antibody research and development for cancer, diagnostics. Your qualifications should include a BS/MS and experience in all aspects of hybridoma generation and characterization. Reply to Job #RW2.

Triton offers competitive salaries and benefits, including relocation assistance. For consideration, send your resume with cover letter highlighting your qualifications and including the names of three references to Triton Biosciences Inc., 1501 Harbor Bay Parkway, Alameda, CA 94501. EEO/AA employer.



Triton Biosciences Inc.



Molecular Biologist

CIBA-GEIGY's Agricultural Division has an excellent opportunity for a Molecular Biologist to contribute to our genetic engineering and crop improvement program. Long recognized as one of the world's foremost producers of crop protection chemicals, we have made a major commitment to Biotechnology research at our facility in Research Triangle Park, NC.

The Senior Scientist we seek will design eukaryotic gene expression systems for the production of foreign proteins. Qualified candidates will have a PhD plus two years of postdoctoral experience. Training should be in the area of Molecular Biology or a related discipline, specializing in foreign gene and protein expression. Experience with yeast and/or insect cell systems is also required.

You will find that our career support and advancement opportunities are exceptional. CIBA-GEIGY provides a competitive salary and generous company-paid benefits, including relocation assistance. Please forward your resume, including three letters of professional reference, in confidence to: **Dr. Mary-Dell Chilton, CIBA-GEIGY Corporation, Agricultural Division, P.O. Box 12257, Research Triangle Park, NC 27717.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

OUR WORLDWIDE INFLUENCE STARTS WITH ADVANCED RESEARCH

G.D. Searle is recognized worldwide for innovative science and respected products. Research is a top priority in our ongoing commitment to increased growth and industry influence. We now offer two exceptional opportunities to support our dedication to a leadership role in Gastrointestinal Drug Discovery.

SR. RESEARCH INVESTIGATOR/IMMUNOLOGY

An immunopharmacologist to develop innovative new approaches to treating inflammatory bowel diseases (IBD). Duties include the utilization of animal models of IBD and in vitro assays to develop drugs for mucosal anti-inflammatory activity. The successful candidate will hold a PhD in immunology, biochemistry or pharmacology with at least 2 years postdoctoral experience.

SR. RESEARCH INVESTIGATOR/MOTILITY

An individual to characterize gastrointestinal smooth muscle function in vitro, utilizing contraction models and methods of pharmacologic receptor analysis. Other responsibilities include integrating biochemistry of smooth muscle into function at the tissue level. Requirements include a PhD in physiology or pharmacology with at least 2 years of postdoctoral experience in gastrointestinal motility or a related area.

We offer an outstanding professional environment and highly competitive compensation, including generous benefits. For confidential consideration, please forward your resume to: **G.D. Searle & Co., Human Resources Dept. HY11, 4901 Searle Parkway, Skokie, IL 60077.** Equal Opportunity Employer M/F.

SEARLE

NUTRITIONAL EPIDEMIOLOGIST

POSITION OPEN IN THE DIVISION OF EPIDEMIOLOGY AMERICAN HEALTH FOUNDATION

The American Health Foundation is seeking a Nutritional Epidemiologist with an interest in research on chronic diseases, especially cancer. The research will involve extensive collaboration with a multidisciplinary team, including clinical nutritionists, biochemists, epidemiologists, and bio-statisticians. The successful candidate will have:

- 1) An earned Doctoral degree in Nutrition or Nutritional Biochemistry and a Masters degree in Epidemiology, or a combination of other credentials indicative of expertise in both Nutrition and Epidemiology;
- 2) Publications in the fields of Nutritional Epidemiology;
- 3) A record of accomplishment in writing grant applications for peer review;
- 4) Experience in designing, planning, executing, and analyzing epidemiological research projects.

Interested applicants should apply by sending a covering letter, including salary requirements, and CV to:

Division of Epidemiology
American Health Foundation
320 East 43 Street
New York, New York 10017

Equal Opportunity Employer — M/F/H/V.

MOLECULAR GENETICIST LADY DAVIS INSTITUTE FOR MEDICAL RESEARCH

The Lady Davis Institute, a research department of the Sir Mortimer B. Davis-Jewish General Hospital (a McGill University teaching hospital), is seeking a molecular geneticist at the assistant/associate professor level. Applicants should hold Ph.D. and/or M.D. degree(s), have significant post-doctoral experience and the potential for developing a vigorous independent research program on gene expression at a locus involved in human disease. Preference will be given to candidates with M.D. degrees who are qualified and willing to spend 20% of their time in the Division of Genetics of the Department of Medicine.

Send curriculum vitae, statement of research goals and the names of three references to:

Dr. Herbert M. Schulman,
Acting Director
Lady Davis Institute for
Medical Research
Sir Mortimer B. Davis-Jewish
General Hospital
Montreal, Quebec, Canada H3T 1E2

DEPARTMENT OF PSYCHIATRY UNIVERSITY OF TORONTO

Applications are invited for the position of Assistant Professor in the area of Molecular Neurogenetics as applied to psychiatric disorders. This position requires a Ph.D. or other doctoral degree and significant post-doctoral experience in molecular genetics, molecular neurobiology or an equivalent field. The successful candidate will be expected to work collaboratively with a multidisciplinary neuroscience/neuropsychiatric research group comprised of basic and clinical researchers investigating the neurobiology and neurogenetics of psychiatric disorders. The position requires demonstrated ability to conduct independent research within a collaborative group and to compete for extramural funding.

The position is tenure track equivalent supported initially by the I'Anson fund. Salary is commensurate with rank and experience. The position also includes a one time start up research grant.

The University encourages both men and women to apply for positions. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

Candidates should submit a letter of application, a curriculum vitae and the names of three referees from whom letters of recommendation may be solicited. Please submit responses to: Dr. Jerry J. Warsh, Director of Research, Clarke Institute of Psychiatry, 250 College Street, Toronto, Ontario, Canada M5T 1R8.

The successful candidate would be expected to take up the appointment prior to September 1, 1989.

Closing date for applications is May 19, 1989.

Immunology

We are currently seeking a staff scientist to join our immunology group. This position requires a Ph.D. in Immunology with established expertise in the areas of Immunochemistry, immune response and/or Cytokine functional analysis. The successful candidate must communicate effectively and interact extensively with scientists from all disciplines including molecular genetics, protein biochemistry and mammalian cell culture.

This highly interactive and visible position requires strong organizational skills.

We offer a stimulating and dynamic work environment in addition to an excellent salary and comprehensive benefits program.

Interested candidates should forward a resume, in confidence, to: Sheri Rist, Genetics Institute, 87 CambridgePark Drive, Cambridge, MA 02140.

An Equal Opportunity Employer M/F/H/V

Genetics Institute

MOLECULAR PHARMACOLOGIST

Committed To
Scientific
Excellence



The Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug Inc., announces an opening for a Senior Research Biologist in the Pharmacology Department at its Rensselaer, New York facility.

An excellent opportunity exists for a molecular pharmacologist who has expertise in growth factor, ion channel or neurotransmitter receptor binding studies to participate in an interdisciplinary approach to basic research and drug discovery. The successful candidate should have a doctoral degree in pharmacology, biochemistry or related discipline and at least two years of relevant post-doctoral training. Experience in cell and tissue culture methodologies would also be desirable.

Sterling Drug Inc. offers competitive salaries and a comprehensive benefits program, along with outstanding career opportunities for personal and professional growth. For confidential consideration, please forward your resume with salary history/requirements to:

Jo Ann Fitzgerald
Employee Relations Administrator

**STERLING
RESEARCH GROUP**
A Division of Sterling Drug Inc.
81 Columbia Turnpike
Rensselaer, NY 12144
A Subsidiary of the
EASTMAN KODAK COMPANY

Equal Opportunity Employer M/F/H/V

POSTDOCTORAL RESEARCH -ORGANIC CHEMIST

A unique position is available immediately for a 1-2 year postdoctoral position, which offers an opportunity to gain experience in a highly competitive pharmaceutical research environment. The ideal candidate will have extensive background in solid and/or solution phase peptide synthesis and a strong knowledge of modern synthetic organic chemistry.

The successful candidate will work on molecular modelling and synthesis of replacements for endogenous vasopressor peptides. Stimulating collaboration with biologists and chemists with international scientific reputations is a hallmark of this opportunity. Development and publication of original ideas will be strongly encouraged.

Berlex Laboratories, located in northern New Jersey, is a wholly owned subsidiary of a major international pharmaceutical company and offers a competitive salary and benefit package. Our location encourages contacts in the greater New York City scientific community.

Interested scientists should send a resume and brief statement of career goals and research interests to: **Joan Bianchini**, Human Resource Representative, R&D, **BERLEX LABORATORIES, INC.**, 110 East Hanover Avenue, Cedar Knolls, N.J. 07927. Equal opportunity employer M/W/H/V

BERLEX
Laboratories, Inc.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP

NIH Staff Fellow/Senior Staff Fellow position is available at the National Institute on Alcohol Abuse and Alcoholism (NIAAA), for studies of neurotransmitter and hormone receptors and their interactions with cytokines and growth factors. Preference is given to applicants with experience in molecular biology, protein purification and receptor biochemistry/pharmacology. Salary is commensurate with experience. Only U.S. citizens or permanent residents are eligible for this position.

Send curriculum vitae and name of three references to: **Dr. George Kunos, Laboratory of Physiologic and Pharmacologic Studies, NIAAA, 12501 Washington Avenue, Rockville, MD 20852. Telephone: 301-443-1234. NIAAA is an Equal Opportunity Employer.**

POSTDOCTORAL MOLECULAR IMMUNOLOGISTS

Two postdoctoral positions are available in an active program of Transplantation Immunology. One individual will conduct studies on immunological unresponsiveness induction in transplant recipients using either purified soluble HLA molecules, synthesized peptides, or recipient cells transfected with donor MHC genes. The second individual will study the regulation of expression of HLA genes.

Salary is commensurate with experience and begins at \$23,196.

Send curriculum vitae and names of three references to **Marvin R. Garovoy, M.D., Immunogenetics and Transplantation Laboratory, University of California, 513 Parnassus Avenue, Health Sciences East, Room 520, San Francisco, CA 94143.**

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

POSTDOCTORAL OPPORTUNITY: A challenging opportunity to study the molecular basis of visual disorders using x-ray crystallography, nuclear magnetic resonance (NMR), magnetic resonance imaging (MRI), and/or light scattering. Applicants with experience in physical chemistry, physics, biophysics, or engineering should send a résumé and the names of three references to: **Maria Courogen, Department of Biotechnology, SM-20, University of Washington School of Medicine, Seattle, WA 98195.** Salary dependent on qualifications.

POSTDOCTORAL POSITION

We are seeking an experienced membrane biochemist who will isolate the complete bacterial flagellar motor and determine its structure by electron microscopy. The Structural Biology Laboratory at Brandeis has extensive facilities for electron microscopy and image analysis and will provide as part of this project training in these techniques. Inquiries and applications, including curriculum vitae and names of three references, should be sent to:

**Dr. David DeRosier
Rosenstiel Basic Medical Sciences Research Center
Brandeis University
P.O. Box 9110
Waltham, MA 02254-9110**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately. Study the regulation of neurotransmitter release in the CNS. Funded at \$18,000 to \$22,000 for up to 3 years. Send curriculum vitae and names of three references to: **Joseph Masserano, Ph.D., Department of Pharmacology, (C236), UCHSC, 4200 East 9th Avenue, Denver, CO 80262.**

POSTDOCTORAL POSITION available. Neurochemist needed to study the regulation of the enzyme tyrosine hydroxylase in pheochromocytoma cells, bovine chromaffin cells and the rat central nervous system. Preference will be given to candidates with a strong background in biochemistry. Send curriculum vitae and the names of three references to: **Norman Weiner, M.D., Department of Pharmacology, Box C236, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262.**

POSITIONS OPEN

POSTDOCTORAL POSITION open for studying long-term functioning of identifiable adult neurons and the behaviors the neurons mediate. Studies include behavior and its physiological and biochemical substrates. A multidisciplinary center on aging provides added resources. Competitive stipend is provided for 3 years. Send résumé and names of three references to: **Dr. Bert Peretz, Department of Physiology, University of Kentucky Medical Center, Lexington, KY 40536-0084.**

POSTDOCTORAL POSITION available to study DNA photolyase and the mechanism of enzymic photorepair of DNA damaged by ultraviolet light. Send curriculum vitae and names of three references to: **Dr. M. Jorns, Department of Biochemistry, Hahnemann University, Broad and Vine, Philadelphia, PA 19102.**

POSTDOCTORAL position available for M.D. or Ph.D. with experience in molecular biology beginning summer of 1989 to study the molecular mechanisms controlling feeding behavior. Approaches being taken include a molecular analysis of neuropeptide genes which affect feeding as well as a "reverse genetics" approach to clone mutant mouse genes which affect feeding behavior.

Please send curriculum vitae, summary of research, and names of three references to: **Dr. Jeffrey M. Friedman, Howard Hughes Medical Institute, The Rockefeller University, 1230 York Avenue, New York, NY 10021.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study the modulation of epithelial chloride channels using optical as well as electrophysiological techniques. Applicant should have a Ph.D. with a background in transport or electrophysiology desirable. Salary: \$30,000 for the first year. Applications including curriculum vitae should be sent to: **Dr. Deborah J. Nelson, The University of Chicago, Department of Medicine, Hospital Box 249, 5841 South Maryland Avenue, Chicago, IL 60637.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION available 1 July 1989 to study the regulation of swarmer cell differentiation in *Proteus mirabilis*. Ph.D. in microbiology, molecular biology or biochemistry required. A strong background in recombinant DNA technology preferred. Closing date for applications is 30 June 1989. Send curriculum vitae and the names of three references to: **Dr. Robert Belas, Center of Marine Biotechnology, University of Maryland Systems, 600 East Lombard Street, Baltimore, MD 21202.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS available immediately to study molecular and cellular mechanisms controlling parietal cell HCl secretion. Projects require experience in (i) cell culture/protein isolation/purification or (ii) computer-based video image analysis/epifluorescence techniques. Salaries competitive. Reply to: **Catherine S. Chew, Ph.D., Department of Physiology, Morehouse School of Medicine, 720 Westview Drive SW, Atlanta, GA 30310.**

Morehouse School of Medicine is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN IMMUNOLOGY, MOLECULAR BIOLOGY, AND VIROLOGY. Several are available in multidisciplinary experimental studies utilizing anti-idiotypic antibodies to examine the molecular basis of idiotype networks induced during viral infections. The viral systems to be studied include hepatitis B virus, human immunodeficiency virus (HIV), simian immunodeficiency virus and simian virus 40. In addition, positions are also available to examine the use of anti-idiotypes to mimic various toxic substances and in cellular immunology aspects of HIV and STV infection. These studies will be performed in the laboratories of **Drs. Ronald C. Kennedy and Tran C. Chanh.** Annual postdoctoral salaries range from \$21,070 to \$29,266, dependent upon prior relevant postdoctoral experience. Applicants must have a Ph.D. or M.D. degree or expect to obtain one by the end of 1989. Send curriculum vitae, and names, addresses and telephone numbers of at least three references to: **Personnel Director (23), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** Equal Opportunity Employer M/F.

POSITIONS OPEN

POSTDOCTORAL POSITIONS available to study mutagenesis and the replication of damaged DNA in *E. coli* and yeast. Current work includes molecular analysis of yeast genes concerned with mutagenesis (such as REV3, which encodes a nonessential DNA polymerase) and experiments with vectors carrying a single defined lesion. Applicants should have, or expect soon to receive, a Ph.D., and preferably some experience in molecular biology. Send curriculum vitae and names of three references to: **Dr. C. W. Lawrence, Department of Biophysics, University of Rochester Medical Center, Rochester, NY 14642. Telephone: 716-275-2948.** The University of Rochester is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN MOLECULAR NEUROBIOLOGY for individuals interested in an interdisciplinary approach to the study of receptor-operated ion channels, with emphasis on GABA_A and excitatory amino acid receptors. Techniques include molecular biology, radioligand binding, photoaffinity labeling, ligand-stimulated ion flux, monoclonal antibodies, patch-clamp electrophysiology, and fluorescence digital image analysis. Salary \$22,000 to \$30,000. Send curriculum vitae to: **Dr. David Farb, Department of Anatomy and Cell Biology, SUNY Health Science Center, 450 Clarkson Avenue, Brooklyn, NY 11203.** Equal Opportunity/Affirmative Action Employer.

TWO POSTDOCTORAL POSITIONS are available to study the metabolic and molecular biological changes in legume plants with enhanced nitrogen fixation and altered ammonia assimilation [*Science* **241**, 951 (1988)]. These plants have impaired glutamine synthetase in their roots and nodules, yet they have increased N assimilation and specific activity and protein concentration of nitrogenase. Motivated individuals with research experience in either plant physiology, molecular biology or biochemistry are sought. Research approach is an integration of molecular biology and biochemistry/physiology and offers an excellent opportunity to develop personal initiatives. Ample travel funds are available and laboratory facilities are excellent. Salary \$20,000 to \$32,000, depending upon qualifications. Send curriculum vitae and letters of recommendation to either **Dr. Pat J. Unkefer, Mail Stop C345, Los Alamos National Laboratory, Los Alamos, NM 87545. Telephone: 505-665-2556**, or to: **Dr. Champa Sengupta-Gopalan, Plant Genetic Engineering Laboratory, New Mexico State University, Las Cruces, NM 88003. Telephone: 505-846-5784.** To apply formally, send résumé, employment application, undergraduate and graduate transcripts, and three letters of reference to: **Carol Rich, Human Resources Development Division PD-89-061, Los Alamos National Laboratory, Los Alamos, NM 87545.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS (TWO)—Available for studies of (i) signal transduction and calcium-dependent second messenger function in liver and/or neurosecretory cells and (ii) mechanisms of cocaine and alcohol interaction with excitation-contraction coupling in cardiac muscle. These research projects will utilize a range of recently developed techniques, including high-speed digital imaging fluorescence microscopy and confocal laser scanning microscopy. The laboratory is well funded and brings together a number of researchers in areas of biochemistry, biophysics and physiology in an interdisciplinary approach. Prior experience in one of the following areas would be an advantage: inositol lipid metabolism, intracellular calcium homeostasis, cardiac physiology. Send curriculum vitae and names of three references to: **Dr. Andrew P. Thomas, 271 Jefferson Alumni Hall, Thomas Jefferson University, Philadelphia, PA 19107.** Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE: A Duke University and EPA cooperative study will use oxygen-18 labeling techniques to investigate tissue oxidation during exposures to ozone and other inhaled pollutants. Experience with oxidative or free radical chemistry and familiarity with instrumentation is preferred. Interested individuals should send curriculum vitae to: **Dr. Gary Hatch, Chief, Biochemical Toxicology Section, MD-82, U.S. EPA, Research Triangle Park, NC 27711.** Affirmative Action/Equal Opportunity Employer.

The Science Of Success

Repligen Corporation is a leader in the application of

Biotechnology to the health care market. We are currently developing an AIDS vaccine, AIDS therapeutic and diagnostic products, cancer therapies, and novel bioprocess reagents. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of our effort has created the following opportunity:

Research Scientist Cell Biology

This scientist will direct the tissue culture and cell biology laboratory expressing recombinant proteins in eukaryotic cells. Responsibilities will include directing research using cell-based assays to examine protein structure and function, and coordinating mammalian and insect cell culture. A Ph.D. is required, with a history of research which applies protein chemistry or molecular biology training to cell biology questions. Experience in studying cell surface proteins is a plus.

Repligen Corporation offers a competitive salary and excellent benefits and equity participation. Please submit a cover letter, resume, and references to: **Barbara Fleming, Recruiter, Repligen Corporation, One Kendall Square, Bldg. 700, Cambridge, MA 02139.** An Equal Opportunity Employer.

RepliGen

MANAGER, ANIMAL PHYSIOLOGY

Collagen Corporation, a dynamic and growing biotechnology company dedicated to expanding its research, development, production and marketing of differentiated biomedical products, has an immediate opportunity for a Manager of Animal Physiology.

In this critical position, you will assume a leadership role, supervising the personnel and directing the activities of our animal facility. In addition, you will provide support to and be an active participant in all research programs and implement the policies of the Institutional Animal Care and Use Committee (IACUC).

The successful candidate will have the following qualifications: DVM degree and at least 5 years' experience in the care and husbandry of laboratory animals, AALAS certification, familiarity with USDA and NIH animal care guidelines, excellent communication and interpersonal skills, and the ability to manage a variety of projects simultaneously. Supervisory experience is essential. Experience in orthopedic research and animal modeling is desirable but not essential.

At Collagen, we offer opportunities for career growth and development in a stimulating environment, in addition to an attractive salary and full benefits. For immediate consideration, please send your resume with references, to: S. Hansen, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.



COLLAGEN
CORPORATION

UIC

College of Medicine at Peoria

Senior Research Specialist.

A non-tenure track position available immediately to study noradrenergic seizure regulation in the Genetically Epilepsy-Prone Rat (GEPR). Experience in neuroanatomy, histology, intracerebrodialysis, HPLC with electrochemical detection, stereotaxic placement of cannulae within the brain and evaluation of seizures is necessary. The candidate should have some expertise in utilization of computers in a research laboratory. A Ph.D. degree in neuroanatomy, neurophysiology or neuropharmacology is required.

Postdoctoral Research Associates

Positions now available to study noradrenergic seizure regulation in the Genetically Epilepsy-Prone Rat (GEPR). Experience in stereotaxic lesioning techniques, microdialysis or kindled seizures desirable. Requirements: doctorate with experience in neuropharmacology, neuroanatomy, neurophysiology or a related discipline. Individuals who have completed the Ph.D. degree within one year of application will be considered for one position. For the second position, preference will be given to individuals with one to two years of relevant postdoctoral experience. Experience in electrophysiology is desirable but not essential.

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

Send CV and names of three references to:
Phillip C. Jobe, Ph.D., Chair, Department of Basic Sciences
University of Illinois College of Medicine at Peoria
P.O. Box 1649, Peoria, IL 61656.

BIOTECHNOLOGY

BIOCHEMICAL ENGINEER/SCIENTIST

At Cetus Corporation, we are committed to maintaining a leading role in the development of biotechnology-based products. Our Process Development Group has an immediate opening for a Biochemical Engineer/Scientist with expertise in the area of downstream purification.

You will have an understanding of the underlying engineering principles of scale-up to rationally extrapolate laboratory/pilot scale purification findings and assess feasibility for commercialization. You will perform engineering analyses of purification operations including design and operation of large-scale chromatographic separations of proteins, as well as review all purification process options and develop an engineering view towards scalability by consulting with appropriate scientists and project engineering staff. Evaluation of costs, reliability, throughput and timing will require a "hands-on" role in conducting research at the bench and pilot scale.

We require a PhD, preferably in Chemical Engineering, although other disciplines with relevant experience will be considered, and a minimum of 1-2 years' experience in protein purification. Industrial experience in protein purification would be an asset.

Cetus offers an excellent salary and benefits package along with an environment that encourages innovation and growth. For consideration, please send your resume to Cetus Corporation, Box BF, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



U.S. PATENT AND TRADEMARK OFFICE

POSITION: Microbiologist/Patent Examiner Opportunity involves the scientific and legal evaluation of patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, microorganisms, cell biology, cell culture, fermentation, enzymology or clinical chemistry.

QUALIFICATIONS: A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

A Ph.D. or M.S. degree with relevant research experience is preferred. A B.S. degree with significant research experience will be considered.

Research Experience in any of the following areas would be beneficial: DNA cloning, protein chemistry, gene expression, sequencing techniques, muteins, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunossays, hybridization techniques, fermentation, enzymatic reaction, diagnostics and automation of clinical analysis.

SALARY: Dependent upon experience and qualifications.

LOCATION OF POSITION: Arlington, VA

For further information contact:

Patent and Trademark Office
Office of Personnel, C&E
CPK 1, Suite 700
Washington, D.C. 20231
703-557-3631
Toll free: 800-368-3064

UCLA CELL AND MOLECULAR PHYSIOLOGY



The Department of Physiology invites applications for tenure track faculty positions at the level of

Assistant Professor

Outstanding candidates working in any area of contemporary physiology will be considered, but those in smooth muscle, reproduction and development, endocrinology, sensory transduction, and the cardiovascular system are encouraged to apply. Successful candidates are expected to have a Ph.D. or M.D. with postdoctoral experience, to provide evidence that they can pursue a vigorous, independent research program and to participate in our teaching program.

Resources and an excellent environment exists for developing an academic career within an interactive community. Interested scientists should send their curriculum vitae, a statement of present and future research interest, and names of three references to: Ernest M. Wright, D.Sc., Professor and Chairman, Department of Physiology, UCLA School of Medicine, Los Angeles, CA 90024-1751.

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

Postdoctoral Opportunities Protein Structure/ Function Research

The Macromolecular Sciences Department of Smith Kline & French Laboratories, located in suburban Philadelphia, PA, is seeking outstanding postdoctoral scientists to conduct structure-function research on proteins and their macromolecular interactions and the synthetic/genetic design of recognition molecules.

Candidates must have a Ph.D. in Chemistry, Biochemistry, Biophysics or related science. Experience in one or more of the following areas would be desirable: (1) protein characterization, (2) macromolecular interactions, (3) biophysical methods, (4) chemical modification and recombinant DNA mutagenesis of proteins, (5) peptide synthesis.

We offer an excellent compensation and benefits package and an attractive relocation policy as well as an exciting and active work environment that offers considerable opportunity for personal and professional growth. Resumes and names of three references should be sent to: Nancy Hasson, Employment Administrator, S0100, Smith Kline & French Laboratories, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

A SmithKline Beckman Company



MOLECULAR BIOLOGIST

Sphinx Biotechnologies is a young and rapidly growing company whose mission is to help sick people through discovery, development, manufacturing and marketing of pharmaceuticals targeted towards signal transduction systems involving lipid second messengers.

Molecular Biologist We are seeking a molecular biologist to integrate with our discovery and development programs. The successful candidate will have a Ph.D. in molecular biology, biochemistry or related scientific field, at least three years of postdoctoral experience, expertise in the use of recombinant DNA techniques for the expression of proteins, and demonstrated ability to interact with a multidisciplinary research team.

Sphinx Biotechnologies offers excellent compensation and benefits as well as an attractive relocation policy. We are located in the Research Triangle area of North Carolina which offers excellent living conditions and outstanding schools. For confidential consideration, please forward your curriculum vitae, list of publications and names of three references to:

Sphinx Biotechnologies Corporation
Position 104
Post Office Box 727
Durham, NC 27702-0727

TOXICOLOGISTS

Delta Environmental Consultants, Inc. is seeking experienced toxicologists to assume responsibilities for: conducting independent toxicology projects in relation to environmental impact statements, hazardous waste management and endangerment assessments; providing project support for site assessments, remedial investigations and engineering activities conducting multiple exposure pathway health risk assessments; preparing exposure guideline documents and managing other projects as assigned.

This individual should have a Master's degree in Toxicology or a related field, at least two years of work experience as a regulatory or consulting toxicologist and possess strong communication skills, both oral and written. A working knowledge of industrial hygiene practice would be helpful.

Interested candidates should submit their resume and salary requirements to: **Deborah L. Coleman, Director of Benefits and Employment, DELTA ENVIRONMENTAL CONSULTANTS, INC., 1801 Highway 8, Suite 114, St. Paul, MN 55112. EOE M/F.**

The perfect environment for people



Forest Ecosystem Analyst

Responsible for analysis and reporting of data from a national forest monitoring program. Interpret trends and patterns in indicators of forest condition including correlation with spatial and temporal trends in air pollution and other stressors. Requires PhD in statistics, forestry, or ecology and 3 years experience analyzing and reporting forest ecosystem data. Knowledge of forest ecology required. Experience with temporal and spatial analysis, analysis of covariance, sampling methods, experimental design, SAS, and computer programming required as well as excellent written and oral communication skills.

Experience with GIS, database management, and ecosystem or forest modelling is desired. Submit cover letter, resume, unofficial transcripts and the names of three professional references by May 5, 1989 to:

**Human Resources
#4510-021/D89**

**NSI Technology Service Corp.
1600 SW Western Blvd.
Corvallis, OR 97333**

An Equal Opportunity Employer
A subsidiary of ManTech Intl. Corp.

Research Assistants/Associates Biochemistry/Molecular Biology

Genentech, Inc., a leader in the field of biotechnology, has opportunities available for Research Assistants/Associates. Working on programs to discover new human pharmaceuticals, these positions offer a challenging opportunity to be a key team participant.

Typical requirements include a BS/MS in Biochemistry, Molecular Biology, Chemistry or closely related scientific field. Candidates must have a minimum of 2 years' experience in one or more of the following areas: biochemistry techniques including chromatography, electrophoresis, protein purification and characterization, cell culture and assay development; molecular and cell biology techniques including DNA cloning, expression and sequencing.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your resume to Yvonne Davino, Human Resources Dept. RA, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

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LIFE SCIENTIST

**Atlanta,
Georgia
Office**

Syracuse Research Corporation, a leader in the field of assessment of potentially-hazardous substances, is expanding its business and has openings for Scientific Writers with expertise in one or more of the following disciplines:

- Mammalian Toxicology
- Mammalian Biology/Physiology
- Biochemistry
- Epidemiology/Biostatistics
- Pharmacology
- Carcinogenesis/Mutagenesis/Teratogenesis

These non-laboratory positions involve the written evaluation of published experimental data concerning the adverse effects of chemical pollutants upon lab animals and humans and the environmental fate of those chemicals. PhD, MS or other advanced Degree preferred. Applicants must have demonstrated skills in technical writing.

SRC offers competitive salaries and benefits and a creative and challenging work environment. Send resume to:

**Syracuse Research Corp.
Personnel Dept.
Merrill Lane
Syracuse, NY 13210**

An Equal Opportunity Employer



POSITIONS OPEN

POSTDOCTORAL POSITIONS (TWO)

MICROBIOLOGY/BIOCHEMISTRY/FERMENTATION SCIENCE: Two postdoctoral positions available on or before 1 July 1989 for study of the microbiology and biochemistry of microbes from extreme habitats (temperature, salinity, pH, and substrate availability). Background in one or more of the following areas preferred: culture of chemolithotrophic and/or obligate anaerobic microorganisms, biochemistry of sulfur metabolism and/or cellular energy generation reactions, fermentor design/operation, cell yield optimization. Opportunity to interact with a multidisciplinary group of microbiologists, engineers and biochemists. Salary range \$20,000 to \$26,000 per year. Send résumé to: **UCLA Center for the Study of Life in Extreme Environments, Department of Microbiology, 5304 LS, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.** For further information, write the above address or call: 213-206-8201.

POSTDOCTORAL/RESEARCH ASSOCIATE.

A position is available for an individual with a Ph.D. in pharmacology, biochemistry, or cell physiology. The successful applicant will be engaged in research involving the effects and mechanisms of action of atrial natriuretic factor and cyclic GMP in cultured vascular and renal cells, with particular emphasis on calcium, cyclic nucleotide metabolism and cell proliferation. Competitive salary and fringe benefits are available. Appointment will be for 1 year, with possibility of renewal. Please send curriculum vitae and three letters of recommendation to: **Dr. Aviv Hassid, Department of Pharmacology, New York Medical College, Valhalla, NY 10595,** or call: 914-993-4135. *New York Medical College is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

[Chemist, Cell Biologist, or Immunologist, GS-11/12 (\$28,852 to \$34,580)]. Two positions available immediately, second year negotiable, with the U.S. Department of Agriculture, Agricultural Research Service, Veterinary Toxicology Research Laboratory, College Station, Texas, located on a sixty-acre modern facility adjacent to the College of Veterinary Medicine, Texas A&M University. One position involves encapsulation of drugs and mycotoxins and the mechanism of interaction of drugs and mycotoxins with cell membranes. The other position involves the preparation of monoclonal antibody based ELISA's for detection of drug residues in animal fluids. This research is part of a high priority Agency project of interest to FDA and FSIS. Ph.D. obtained in the last 3 years is desired. Send applications to: **Dr. J. R. DeLoach, USDA-ARS-SPA, VTERL Complex, Route 5, Box 810, College Station, TX 77840.** For application procedures, contact **Carol Gramlich: 301-344-1508.** Applications should be marked S-9-010.

An Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE

positions for studies of measurements of redox metabolism and oxygen concentrations in viable cells, tissues, and in vivo. Prefer background in cell biology, nutritional sciences, biochemistry, or electron spin resonance. Available immediately but may start later. Send curriculum vitae and names of three references to: **Harold Swartz, M.D., Ph.D., Departments of Medicine and Biophysics, University of Illinois, College of Medicine at Urbana-Champaign, 506 South Mathews, Urbana, IL 61801.**

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

POSTDOCTORAL RESEARCH ASSOCIATE

position available immediately for 2 years at Texas A&M University, Department of Entomology, College Station, Texas to study molecular biology of gene expression using recombinant forms of a genetically engineered baculovirus. Successful applicant should be trained in recombinant DNA techniques; experience in cell and tissue culture also required for the conduct of the research. Salary \$22,000 to \$25,000. Send curriculum vitae and names of three references preferably by 15 May 1989 to: **Dr. Max D. Summers, Distinguished Professor, Department of Entomology, Texas A&M University, College Station, TX 77843.**

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

position available to study the role of trophic factors in neuronal regeneration and in neurodegenerative diseases. Background in cell biology, biochemistry, or molecular biology desirable. Send curriculum vitae and names of three references to: **Dr. F. Hefti, Andrus Gerontology Center, University of Southern California, Los Angeles, CA 90089-0191.**

POSTDOCTORAL/RESEARCH ASSOCIATE

positions (two) available immediately for multidisciplinary study of neurotransmitter-receptor interactions in the CNS. Emphasis on receptor: binding, distribution (autoradiography), regulation, and second messenger systems. Applicants should have some background in neuroanatomy, neuropharmacology and/or neurochemistry. Salary commensurate with experience. Send curriculum vitae, statement of research interests and the names of three references to: **James K. Wamsley, Ph.D., Director of Research, The Neuropsychiatric Institute, 700 First Avenue South, Fargo, ND 58107.**

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available at the level of postdoctoral research associate to teach medical physiology to first year medical, dental, and pharmacy students, to teach graduate level course in physiology, to conduct interdisciplinary research on the central nervous system effects of bacterial products and immune response modifiers, and to director support personnel. Other special requirements are: knowledge and experience in use of HPLC and gas chromatography, knowledge and experience in use of mass spectrometry, experience in microbiological techniques including growth of bacteria and isolation of various bacterial products and relevant publications. The annual salary will be \$24,000. Applicants with a Ph.D. degree send curriculum vitae and the names of three references to: **Dr. Edward G. Schneider, Acting Chairman, Department of Physiology and Biophysics, University of Tennessee, Memphis, 894 Union Avenue, Memphis, TN 38163.** *An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

POSTDOCTORAL RESEARCH POSITIONS—TWO POSTDOCTORAL RESEARCH POSITIONS ARE AVAILABLE IMMEDIATELY

in a productive, well-funded NIH group to investigate the mechanism of interaction of ethanol and anesthetics with biological membranes and identify the structural/chemical basis of acquired tolerance to these agents. Experience in either biological applications of NMR/ESR or in state-of-the-art methods of isolation and analysis of membrane lipid constituents is required. Facilities include multinuclear Bruker AM 360 wide-bore NMR and IBM ER200D ESR. Highly competitive salary offered. Send curriculum vitae, a brief statement of research interest and names of three references to: **Dr. Theodore F. Taraschi, Thomas Jefferson University, Department of Pathology and Cell Biology, Room 264 Jefferson Alumni Hall, 1020 Locust Street, Philadelphia, PA 19107.** *Equal Opportunity Employer.*

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Research Positions Available for U.S. Citizens

Division Head Position available for **IMMUNOLOGIST** or **Immunochemist**. Candidates should have Ph.D., experience in immunoassay development, immunochemical analysis, cell-mediated immunity and human immune response mechanisms. Position # **LDS 0031.** **ORAL EPIDEMIOLOGY** position available for individual with M.S. or higher in Epidemiology, Public Health, Statistics, Biochemistry or Dentist (public health). Candidate must have published in the field of oral epidemiology or clinical research. Position # **LDS 0034.** **RESEARCH DENTAL HYGIENIST** with M.S. in dental hygiene, chemistry, immunology, or microbiology, to conduct research. Requires valid state hygienist license. Position # **LDS 0032.**

Interested individuals should send résumé, LDS# and two letters of reference to: **Ms. Peggy Hough, Staffing Division, Consolidated Civilian Personnel Office, Building 1-H, Great Lakes, IL 60088-5200.**

The United States Navy is an Equal Opportunity and Affirmative Action Employer.

POSITIONS OPEN

PRE- AND POSTDOCTORAL TRAINING IN

NEUROBIOLOGY is available through the Cellular and Clinical Neurobiology Program at Wayne State University School of Medicine. The 13 participating investigators offer an integrated team-taught curriculum and a wide variety of laboratory experiences, including molecular genetic, neurochemical, electrophysiological, behavioral and clinical analyses of neurotransmitters and receptors and their possible involvement in neuropsychiatric disorders. Graduate fellowship positions, which provide a beginning stipend of \$11,500 plus insurance and tuition allowances, are still available for qualified applicants for fall 1989. For further information contact: **Dr. Michael Bannon, Cellular and Clinical Neurobiology Program, Center for Cell Biology, Sinai Hospital of Detroit, 6767 West Outer Drive, Detroit, MI 48235** or call 313-493-5167.

RESEARCH ASSISTANT

Cedars-Sinai Medical Center, an 1120-bed teaching research facility, has a postdoctoral position available in molecular biology/genetics to analyze genome structure, junction, and evolution around the alpha-globin gene complex.

Applicants should have a Ph.D. and/or M.D. and experience in molecular biology.

For immediate consideration, please send résumés to:

**Mark W. Schmitz
Cedars-Sinai Medical Center
Employee Relations
8700 Beverly Boulevard
Brown Building, 1st Floor
Los Angeles, CA 90048**

RESEARCH ASSOCIATE in neurophysiology, involves patch clamping and whole cell recording from photoreceptors of *Drosophila* and larger flies. Studies concern the light-dependent cation channel, effect of various agents on the photoresponse, and noise analysis of photoreceptor mutants. Ph.D. in biology or neurophysiology with strong experience in single-cell electrical recording is desirable. Send curriculum vitae, reprints and three letters of reference to: **Dr. R. S. Stephenson, Department of Biological Sciences, Wayne State University, Detroit, MI 48202.** Telephone: 313-577-2869. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE FOR PATHOLOGY

The Department of Pathology and Laboratory Medicine at Mount Sinai Medical Center of Greater Miami is seeking an AP/CP Board-certified pathologist to occupy a junior faculty position within the department. The candidate must have training and experience in DNA in situ hybridization and will be expected to direct a DNA in situ hybridization research laboratory. The candidate must also have a strong background in surgical pathology and immunohistochemistry with particular emphasis and expertise in oncologic pathology and a proven track record of publications in these fields. The position also entails teaching of pathology residents and medical students. Send curriculum vitae to: **Morton J. Robinson, M.D., Director, Department of Pathology and Laboratory Medicine, Mount Sinai Medical Center, 4300 Alton Road, Miami Beach, FL 33140.**

RESEARCH ASSOCIATE IN MUSCLE PROTEIN CHEMISTRY to study structure-function relationships in muscle calcium-regulatory and -transport proteins. Research involves protein/peptide purification, sequencing and chemical modification, working in a well-equipped, established laboratory. Salary dependent on training and experience. Respond to: **Dr. John H. Collins, Department of Biological Chemistry, University of Maryland School of Medicine, Baltimore, MD 21201.** *Equal Opportunity Employer.*

RESEARCH FELLOW IN NEUROPHYSIOLOGY

Experience investigating neuroanatomical and neuro-immunohistochemical central nociceptive mechanisms with some commitment to electrophysiology. Dedicated MGH-Harvard Neuroscience Center. Position available 1 September 1989. Salary range commensurate with experience. Send credentials to: **Dr. Charles Pletti, Massachusetts General Hospital, Boston, MA 02114.**

Director, Environmental Toxicology Division

Health Effects
Research Laboratory
Research Triangle Park, NC



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Environmental
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The U.S. Environmental Protection Agency (EPA) is seeking candidates for the position of Director, Environmental Toxicology Division, Health Effects Research Laboratory (HERL). This position is located in Research Triangle Park, NC and is a permanent full-time position with a salary range of \$57,158 to \$74,303 per annum, commensurate with qualifications.

HERL has a staff of about 300, over 100 of whom hold doctoral level degrees. The Laboratory has a diverse program which includes in vitro, animal, human clinical, and epidemiological research designed to address issues related to the health effects of air and water chemical and biological pollutants.

The Environmental Toxicology Division (ETD) conducts research to determine the health effects of inhaled environmental pollutants. The research is designed to determine cause and effects relationships at pollutant concentrations which mimic those occurring in the environment. Particular emphasis is placed on the development and application of improved methods which enable significant advancement in the knowledge of the health effects of air pollutants. Intense investigations center on the pulmonary and cardiovascular systems, the immune system, host defense mechanisms against infectious and neoplastic disease and other extrapulmonary systems which are susceptible to inhaled pollutants. The Division serves as a primary technical resource within the Agency for activities requiring expertise in animal inhalation studies and in the health effects of common air pollutants. The program includes both intramural investigations and extramural arrangements with univer-

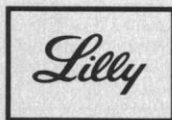
sities, industry, private research institutions and other government agencies. The primary responsibilities of the Director are to direct and manage the program. This includes developing the program to meet the evolving needs of EPA, presenting the program, developing and managing budgets, supervising the staff, directing the progress of the program, and ensuring the scientific quality and productivity of the program.

The preferred candidate for this position would possess the following qualifications:

1. Advanced degree in a biological or environmental discipline with at least six years of professional experience in either of these areas. Applicable graduate coursework may be substituted for a portion of the preferred experience.
2. Experience as a supervisor of a scientific/professional staff.
3. Recognized scientific expertise as evidenced by multiple publications in peer-reviewed literature and invitations to participate in national and international meetings/panels.
4. Proven ability to provide leadership in directing the development and progress of a creative and effective multidisciplinary research program.
5. U.S. Citizenship is required.

Forward curriculum vitae and names of three references prior to May 28, 1989 to: **Dr. Lawrence W. Reiter, c/o Terri Burrell, HRMD (MD-29), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.**

BS/MS SCIENTISTS Pharmaceutical Research



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- Bachelor's or Master's degree in biochemistry, organic chemistry or a related discipline.
- Working knowledge of analytical, physical and protein chemistry.
- Skill in quantitative calculations and mathematical concepts.
- Experience with chromatography, electrophoresis, spectroscopy and computer analysis is desirable.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *résumé* to:

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Science Recruitment (PR-1)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

POSITIONS OPEN

RESEARCH ASSOCIATE PROFESSIONAL ASSISTANT

The Jackson Laboratory, a center for research in mammalian genetics located on the coast of Maine, has an immediate opening for a research associate/professional assistant to conduct basic research experiments aimed at understanding the mechanisms of ras protein action. Experimental methods will include in vitro mutagenesis, gene transfer, protein biochemistry and cell genetics, including gene targeting. B.S. and relevant experience required. Applicants should send curriculum vitae and names of three references to: **Harold Wheeler, Employment Manager, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609. Telephone: 207-288-3371. Affirmative Action/Equal Opportunity Employer M/F.**

UNIVERSITY OF SOUTH FLORIDA

RESEARCH ASSOCIATES. Two-year job assignments available immediately. The Division of Pediatric Endocrinology of the USF College of Medicine invites applications. Applicants should have M.D. or Ph.D. degrees and additional postgraduate experience. Salary commensurate with training/achievement. Applicants should submit curriculum vitae and names of five references to: **Dr. Barry B. Bercu, Professor of Pediatrics, University of South Florida College of Medicine, All Children's Hospital, P.O. Box 31020, St. Petersburg, FL 33731-8920. USF is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH SCIENTIST

Research Scientist needed to develop synthetic methods for drug absorption research. Require Ph.D. in polymer chemistry and knowledge of using advanced instrumentation techniques like FT-IR, high-resolution NMR, GPC, pyrolysis GC-MS, and DSC, strong background in polymer structure correlations to desired biological properties and a working knowledge of polymeric drug delivery systems and special requirement for medical polymers. Salary: \$36,000 per year. Job Order No. 3933252. Contact: **Utah Job Service, 1234 South Main Street, P.O. Box 11750, Salt Lake City, UT 84147.**

RESEARCH VETERINARIAN to perform surgical procedures to derive germ-free animals and perform necropsy. Test all vaccines, reagents and biological raw materials (serum) pursuant to federal regulations and in-house standards, utilizing cell culture, virus titration, immunoassay, biochemical analysis and animal testings. Sample vaccines for federal agencies. Supervise technical staff on research projects. Supervise animal care and facility inspections. Provide veterinary expertise in marketing efforts at trade fairs. Requires D.V.M. or equivalent, plus M.S. in microbiology or a closely related field, also requires some experience with animal vaccination, cell culture, virus isolation, virus titration, and immunoassay. \$27,000 per year 40 hours per week; 8:00 a.m. to 5:00 p.m. Apply at or send résumé to: **Job Service of Iowa, 150 Des Moines Street, Des Moines, IA 50309. Refer to Job #IA 0224305.**

SCIENTIFIC PROGRAMMING

Fein-Marquart Associates (FMA) is a small, established, computer software research and development firm specializing in scientific programming and database systems, especially chemical information systems and laboratory information management systems. Projects vary in size and use a variety of sophisticated computer environments—from microcomputers to large mainframes.

As part of its current expansion, FMA seeks experienced programmers with scientific degree(s) and Fortran experience.

Please send résumé to: **Fein-Marquart Associates, Inc., 7215 York Road, Baltimore, MD 21212. Telephone: 301-821-5980.**

SUPERVISORY RESEARCH CHEMISTS. FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma. Two positions in Career Civil Service. One position will supervise the Combustion Toxicology Research Program; the other position will be responsible for developing the team and new program in Forensic Toxicology Research. Contact: **Shirley Cox, 405-686-4506**, for qualification requirements and application forms. *Equal Opportunity Employer.*

POSITIONS OPEN

SENIOR RESEARCH ASSOCIATE PERMANENT POSITION WITH ADVANCEMENT POSSIBILITIES

Experienced Glycoconjugate Biochemist at a University Hospital. Bench-work-oriented individual with quantitative working habits for investigation of carbohydrate moieties of human cancer cell membranes. Doctorate required. Technical help available. Outstanding salary and excellent benefits. Position is not dependent on grants. Please send curriculum vitae, bibliography and details of expertise to: **Box 54, SCIENCE.**

Equal Opportunity Employer M/F.

TOXICOLOGIST—The State of Washington is accepting applications for State Toxicologist. Requires: knowledge and skill in forensic toxicology; ability to administer laboratory and statewide toxicology program; Ph.D.; diplomate, American Board of Forensic Toxicology (or eligible). Respond by 1 June 1989. Send résumé to: **George G. Ishii, Search Committee, Washington State Patrol, 6604 Martin Way, PQ-11, Olympia, WA 98504. Telephone: 206-438-7221.**

University of California, Los Angeles (UCLA) Urology Division seeks Board-certified **UROLOGIST** with expertise in renal transplantation for faculty position. Requirements: proven ability to organize clinical training; ability to collaborate in immunology research; experience in reconstructive and pediatric urology; excellent surgical skills. Applicants should contact: **The UCLA Division of Urology, Los Angeles, CA 90024-1738. UCLA is an Equal Opportunity/Affirmative Action Employer.**

VIROLOGIST WITH AN INTEREST IN ANTIVIRAL AGENTS

A virologist with postdoctoral experience and an interest in antiviral research is being sought to play a major role in two recently fully-funded grants. The candidate will explore the active components of natural products found to be effective in vivo for their effect on the replication cycle and pathogenesis of hepatitis and retroviruses. The successful candidate should have a sound knowledge of molecular biology, tissue culture techniques and animal models. In addition, this individual will supervise the implementation of assays detecting hepatitis B markers as well as markers of hepatocellular carcinoma. Although this position is nontenure-track, the candidate in time will be encouraged to seek independent funding to pursue related research, which could lead to a tenure-track position. Salary will be commensurate with the candidate's qualifications. Please send curriculum vitae and letters of reference to: **Search Committee for Virologist, Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. The Center is an Equal Opportunity Employer.**

SYMPOSIUM

CALL FOR PAPERS EIGHTH INTERNATIONAL OCEAN DISPOSAL SYMPOSIUM (8IODS) Dubrovnik, Yugoslavia 9 to 13 October 1989

The overall objectives and scope of 8IODS are:

- Provide a forum for exchange of ideas and information among investigators involved in marine pollution and oceanic disposal research
- Enhance the scientific consideration of waste disposal and marine pollution processes
- Generate recommendations and guidelines for future studies of oceanic disposal practices

The 8IODS will feature special sessions and invited keynote speakers. The Co-Chairmen of 8IODS are: **Dr. Velimir Pravdic, Ruder Boskovic, Zagreb, and Dr. Adam Benovic, Biological Institute, Dubrovnik, Yugoslavia.**

Send 250-word abstract by 31 May 1989 to:

**Dr. Iver W. Duedall
Organizing Committee Co-Chairman
Department of Oceanography and
Ocean Engineering
Florida Institute of Technology
Melbourne, FL 32901**

AWARD

To acknowledge and promote excellence in the field of toxicology, the International Life Sciences Institute (ILSI) annually sponsors the **KENNETH MORGAR-EDGE AWARD**. The \$5,000 award to be presented at ILSI's Annual Meeting, January 1990. Recipient must accept in person and present short overview of research. Candidates must be from academia, government or industry. All documents must be in English. Deadline 1 September 1989. For application contact: **F. DeLuca, ILSI, 1126 16th Street, NW, Washington, DC 20036. Telephone: 202-659-0789.**

CONFERENCES

CLINICAL CHRONOBIOLOGY

The International Society for Chronobiology (ISC) and the National Institutes of Health are sponsoring a 1-day conference, 20 June 1989, dealing with the applications of biological rhythms in diagnosis and treatment. The meeting will be held in Lipsett Auditorium in the Clinical Center at the NIH. Although there is no registration fee for the meeting, notification of intent to attend would be appreciated. Contact: **Dr. Kirt Vener, NIAMS, Westwood Building, Room 5A-07, National Institutes of Health, Bethesda, MD 20892; or call: 301-496-0754.** This meeting precedes the XIX Conference of the ISC in Bethesda, Maryland, 20-24 June 1989.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS LIFE SCIENCES RESEARCH FOUNDATION (LSRF)

The LSRF solicits monies from industry, foundations and individuals to support postdoctoral fellowships in the life sciences. Active solicitation of funds continues for which we need the assistance of all concerned individuals.

Eligibility: Three-year fellowships will be awarded on a competitive basis to graduates with M.D. or Ph.D. degrees in any field of the life sciences. U.S. citizens are eligible to apply with no restrictions on the laboratory of their choice. Foreign applicants are eligible for study in U.S. laboratories. Only research in nonprofit institutions will be supported. Those who are changing their field of research by way of a second postdoctoral or as an independent research associate are encouraged to apply.

Timetable: Application deadline is 1 October 1989, for award as early as summer 1990. Awards will be announced in March 1990.

Please note address change for submitting applications:

LSRF, c/o Lewis Thomas Laboratories, Princeton University, Princeton, NJ 08544.

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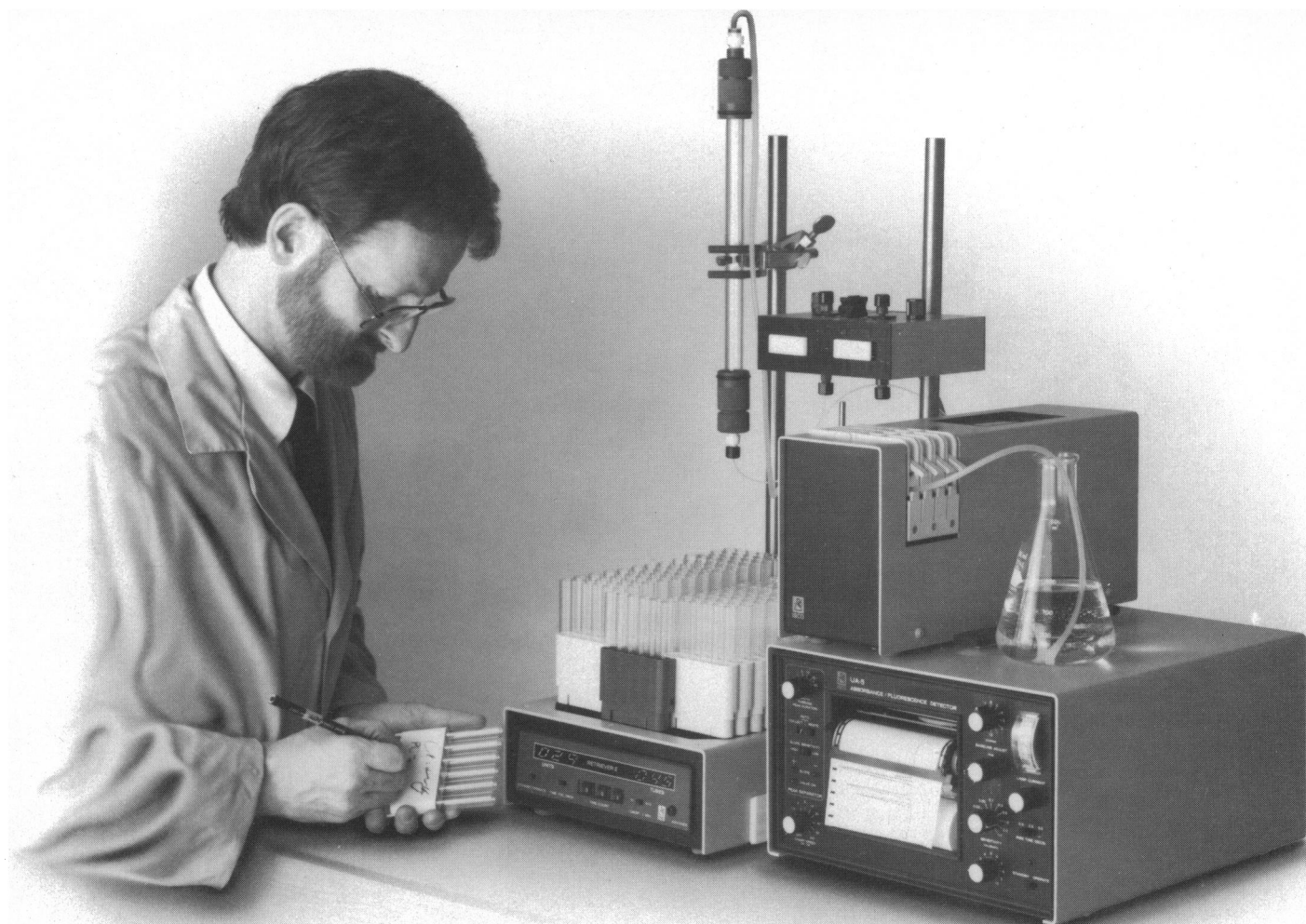
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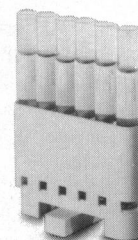


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