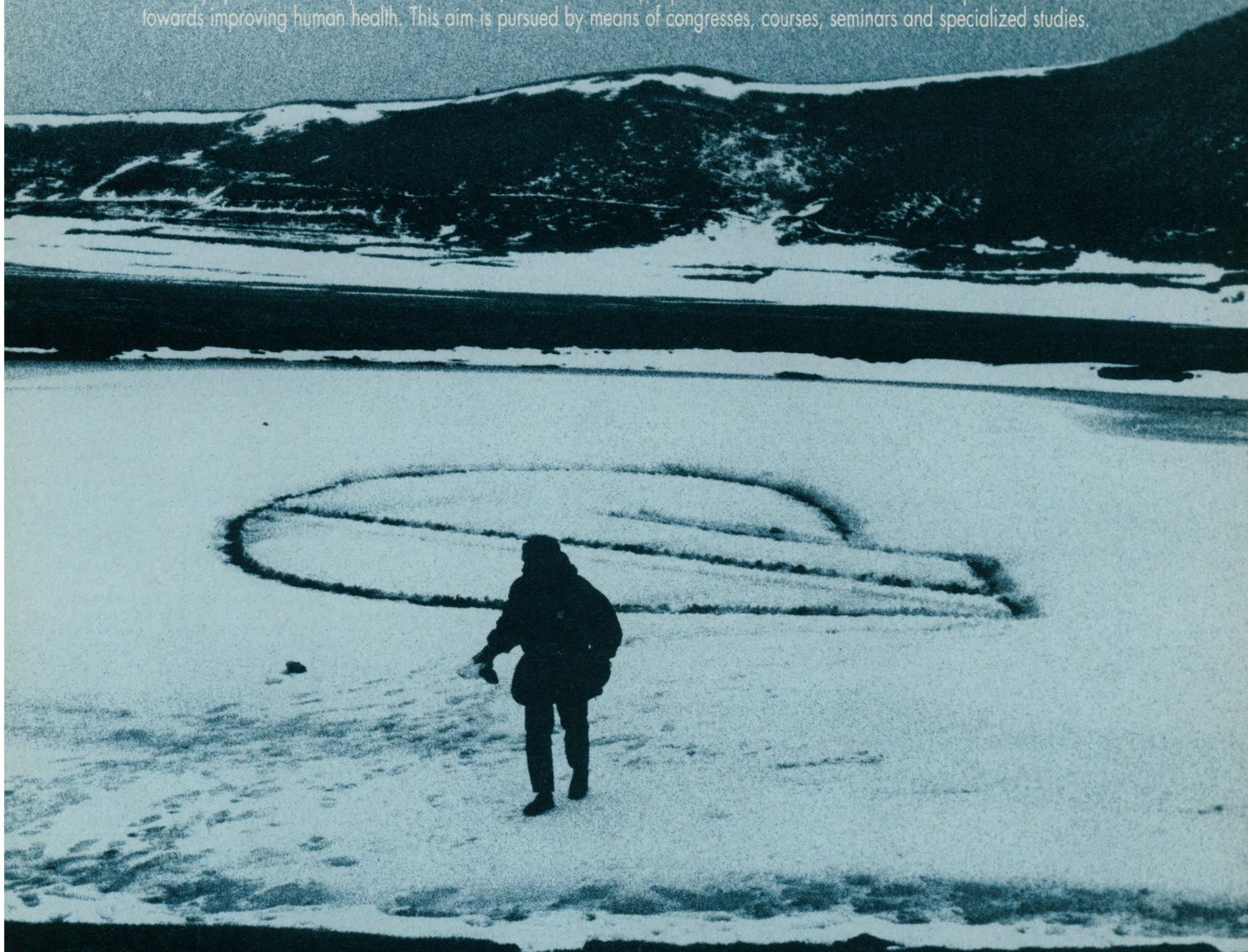


THE CARE TO MEET, TO KNOW, TO UNDERSTAND

Ares-Serono Symposia is an independent foundation, created in 1971, to promote scientific research in all disciplines which contribute towards improving human health. This aim is pursued by means of congresses, courses, seminars and specialized studies.



Some of the international meetings scheduled for 1990 are:

Cytokines: Basic Principles and Clinical Applications

Florence / March 26-28
Scientific Organization: A.K. Abbas (USA) and S. Romagnani (I)

Hormonal Communicating Events in the Testis

Rome / April 9-10
Scientific Organization: M.L. Dufau (USA) and A. Isidori (I)

Reproduction, Growth and Development. V Pan-American Congress of Andrology

Acapulco / April 23-25
Scientific Organization: A. Negro-Vilar (USA) and G. Perez-Palacios (MEX)

Computers in Endocrinology

Milan / May 7-10
Scientific Organization: V. Guardabasso (I), G. Forti (I) and D. Rodbard (USA)

Major Advances in Human Female Reproduction

Rome / May 10-12
Scientific Organization: E.Y. Adashi (USA) and S. Mancuso (I)

The New Biology of Steroid Hormones

Budapest / September 3-4
Scientific Organization: F. Naftolin (USA)

Endocrinology Under 35

Siena / October 8-10
Scientific Organization: M. Maggi (I)

Plasminogen Activators: from Cloning to Therapy

Florence / October 29-31
Scientific Organization: T. Astrup (DK) and G.G. Neri Serneri (I)

IV Conference on Differentiation Therapy

Yamanashi-ken, Japan / November 4-9
Scientific Organization: G.B. Rossi (I), F. Takaku (I) and S. Waxman (USA)



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Invited Speakers:

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Physics: Homer Neal

Chemistry: Bradley Moore

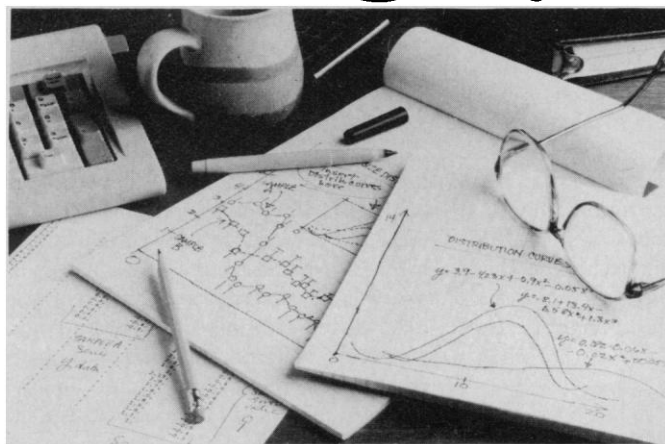
Biology: Paul Williams

Engineering: Karl Pister

For more information write:

Penny Tully, Program, Associate Extension
Service, 200 Hill Street 3297,
Ann Arbor, Michigan 48109.

The agony.

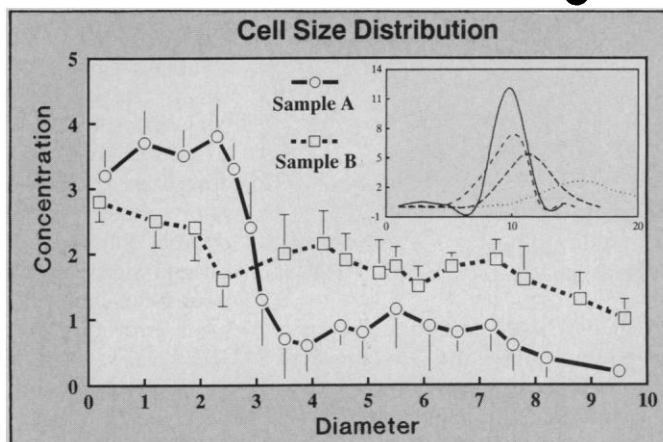


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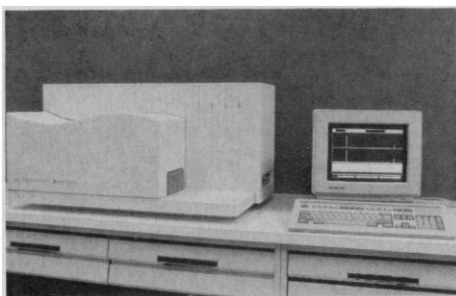
Products & Materials

Immune-Deficient Mice for Research

Severe combined immune-deficient (SCID) mice easily accept foreign tissue transplants, including human tumors, making them effective models for testing new cancer treatments. Demand for SCID mice became widespread when two independent research groups succeeded in implanting human cells into them, creating models for AIDS research. The SCID mice are available with a control strain of C.B-17/Icr congenic mice. Because of the susceptibility of SCIDs to opportunistic infections, production colonies will be maintained in gnotobiotic isolators under strictly controlled flora conditions. The genetic integrity of the SCIDs will be verified through biochemical testing. Taconic Farms and Fox Chase Cancer Center. Circle 452.

Automated High-Performance Capillary Electrophoresis

Model 1600 is a mid-priced unit for high-performance capillary electrophoresis. It offers up to nine different programmable anal-



ysis methods, 30-kV or 300- μ A programmable power supply, and 96-sample vial capacity with one to nine injections per vial by either electromigration or controlled vacuum injection. Model 1600 has an ultraviolet detection system with two analog channels selected from five wavelengths between 197 and 280 nm. Microphoretic Systems. Circle 460.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Volume Rendering Software

VoxelView is a computer graphics software package that allows engineers, scientists, and clinicians to visualize and manipulate anything from a cell to a region of the galaxy, from a molecular model to a seismic survey. VoxelView contains options to rotate, color, and section three-dimensional data, as well as options to adjust the transparency, lighting, and other rendering features. Objects or phenomena that are extremely delicate, short-lived, or complex can be preserved as three-dimensional computer images, retrieved, and studied at any time. VoxelView runs exclusively on workstations from Silicon Graphics Computer Systems. Vital Images. Circle 465.

Automated Viscometer

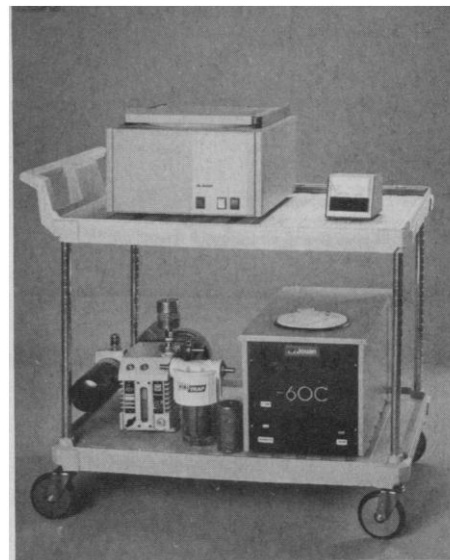
The Schott AVS 310 is a viscometer for solutions without high solid content and with a measurement range of 0.35 to 10,000 mm²/s. It has a storage capacity of up to ten test values, automatic pump pressure regulation, and pretempering time adjustable up to 20 min. It is designed to replace manual viscosity measurements. Schott American Glass & Scientific Products. Circle 467.

Gamma Counter for Absorbance Measurements

The Iso-Data 100E Series Manual Gamma Counter for absorbance measurements combines gamma counting with a wavelength photometer that may be used in conjunction with a variety of assay systems to measure absorbance. It is designed to take absorbance readings through standard laboratory plastic or glass test tubes rather than optically corrected cuvettes. Combined optical and signal processing techniques have virtually eliminated absorbance measurement error due to tube aberration. ICN Biomedicals. Circle 468.

Centrifugal Vacuum Concentrator

Model RC 10.10 centrifugal vacuum concentrator is designed for safe and rapid concentration of biological and other samples in preparation for analysis by chromatography or electrophoresis. Samples are centrifuged at a speed that eliminates bumping and foaming (1300 rpm) while vacuum and heat are applied to remove the solvent. The technique results in virtually 100% recovery of samples such as DNA, peptides,



amino acids, enzymes, and drugs with no contamination. A variety of rotors can handle sample containers from 0.5 to 50 ml, with custom rotors available for other tube sizes. Jouan. Circle 472.

Gas Chromatography on the Macintosh

GC Workmate turns the Macintosh into a workstation for any gas chromatograph or autosampler equipped either with an RS-232 or IEEE-488 interface or with an analog output. Analysis can be performed in real time and/or after the run has been completed. Features include file compression, database searching, internal and external calibrations, calculations, and time stretching. WillStein Software. Circle 477.

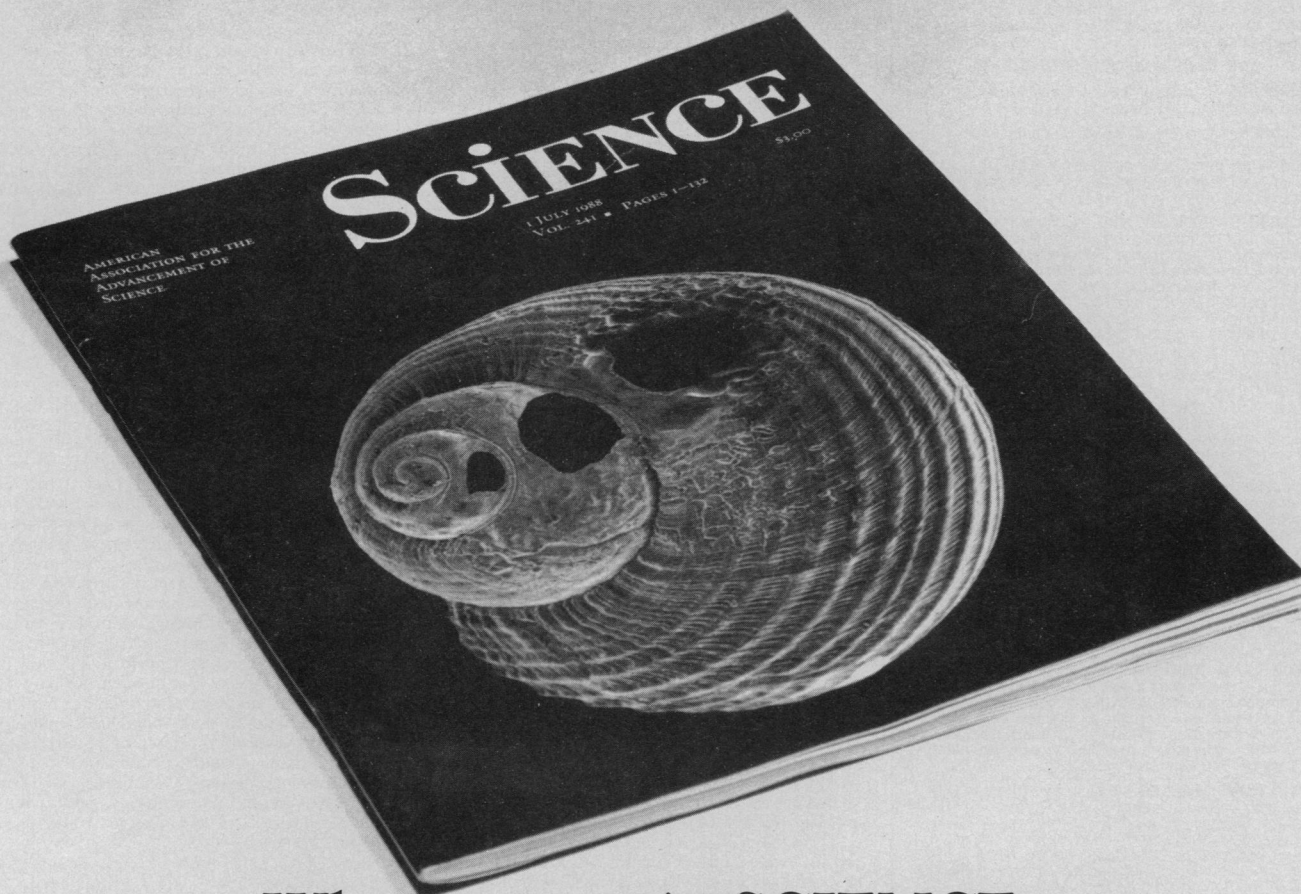
Literature

Biotechnology, a new quarterly publication, has been introduced by a manufacturer of precision bioreactors and related equipment for cell culture growth and management. The first issue includes a report on a new 7-liter bioreactor, a discussion of equipment manufacturing in biotechnology, a technical article on the practical considerations involved in oxygen supply, and other technical notes on bioreactors. Applikon Instruments. Circle 492.

Power Supplies for Electrophoresis introduces 12 FisherBiotech multifeatured power supplies for the most exacting demands. Fisher Scientific. Circle 493.

Sigma Cell Culture Reagents 1990 Catalog/Price List offers a complete line of tissue culture products. The 248-page catalog includes liquid and powder media, sera, serum replacements, reagents and biochemicals, and equipment. More than 100 new items have been added since last year's edition. Sigma Chemical Company. Circle 494.

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DEADLINE: Thursday, 10 a.m., 2 weeks prior to issue date. Advertising is accepted only in writing.

POLICIES: All classified ads will be edited and typeset according to **SCIENCE** style guidelines. NO ABBREVIATIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of issue in which ad appears.

CLASSIFICATION: **SCIENCE** publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Fellowships, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired; however, **SCIENCE** reserves the right to decline classification requests which it believes may be misleading to readers.

RATE: \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. No cash discount. Prepayment required for all foreign ads. Purchase orders required for all other advertising.

To **ESTIMATE** ad cost, structure ad copy on a 52-character line; include any desired heading on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines x \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. **SCIENCE** cannot provide proofs of typeset ads.)

BOXES AND LOGOS: Any 1-column line classified ad can be boxed and/or published with logo. No extra production charge for use of box or logo. For boxed ads, one line equals 48 characters and spaces; two additional lines will be added to cost of ad to allow for top and bottom box rules. Logos are billed according to number of lines needed to accommodate logo.

SITUATIONS WANTED ADS: As a service to AAAS members in good standing, **SCIENCE** offers free placement of Situations Wanted ads for individuals seeking full-time or part-time employment. A blind box may be used. Ads must be submitted in writing with text of 20 words or less, not including address or box number, and are limited to two insertions per member in each calendar year. Please enclose **SCIENCE** mailing label including AAAS membership number when submitting ad.

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Address ad copy or requests for information to:

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Telephone: 202-326-6555
FAX: 202-682-0816

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For rates, deadlines, and other information about fractional display ads (1/6 page and larger) and all **Marketplace** listings of available products and services, contact:

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FAX: 212-382-3725

RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications.

SCIENCE encourages applicants for positions to investigate employment laws, nondiscrimination policies, visa requirements, and cultural differences in the country advertising for employees.

To reply to a blind box ad, address correspondence to:

Box (give number)
SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005

POSITIONS OPEN

ANIMAL BEHAVIOR OR INVERTEBRATE ZOOLOGY. The Department of Biology, University of Central Arkansas, invites application for a tenure-track **ASSISTANT PROFESSOR** position in animal behavior, or invertebrate zoology, to begin 15 August 1990. Recent Ph.D.'s or postdoctorates are encouraged to apply. Preference may be given to applicants whose research involves cell and molecular biology techniques. The individual will teach upper division courses in the specialty, as well as biology for nonscience majors. Submit curriculum vitae, copies of transcripts, a brief description of teaching philosophy and research career goals, and three letters of recommendation to: **Dr. Edmond Griffin, Chairman, Department of Biology, University of Central Arkansas, Conway, AK 72032. Telephone: 501-450-3146.** The deadline for receipt of applications is 1 March 1990. *The University of Central Arkansas is an Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSORS OF ANATOMY

The Department of Anatomy at the University of Mississippi Medical Center invites applications for tenure-track, state-supported faculty positions. The department has excellent research facilities and active research programs in systems neurobiology, cellular neuroscience, the biology of cell interactions, and stroke. Good research space and start-up money are available. The area of research is open, but preference will be given to applicants who are qualified to teach in gross anatomy or histology and who have significant potential for attracting extramural research support. Submit curriculum vitae, research plans, and the names, addresses, and telephone numbers of three references to: **Dr. Duane E. Haines, Professor and Chairman, Department of Anatomy, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216.** The selection process will begin after 15 February 1990. *Equal Opportunity Employer, M/F/H/V.*

ASSISTANT PROFESSOR AQUATIC ECOLOGY/WATER QUALITY

The Division of Biology at Kansas State University has a tenure-track position available at the assistant professor level effective August 1990. Although broadly defined, we are especially interested in aquatic ecologists with postdoctoral experience in biological systems associated with water quality. The division has a strong program in biological research and a distinguished faculty with several millions of dollars in extramural grants. There are excellent research opportunities available, including the 3487-hectare Konza Prairie Research Natural Area, reservoirs, rivers, and agricultural irrigation systems. The successful candidate will be expected to establish a vigorous and creative scholarly program and to participate in our undergraduate and graduate instruction. Candidates should apply by 23 February 1990 by submitting curriculum vitae and a brief description of future research plans, and having three letters of reference sent to:

Terry C. Johnson, Director
Division of Biology, Ackert Hall
Kansas State University
Manhattan, KS 66506

KSU is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR REPRODUCTIVE PHYSIOLOGY UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

The Department of Obstetrics and Gynecology is seeking an individual with a Ph.D. or M.D. and postdoctoral research experience in the area of reproductive endocrinology or vascular physiology to join a research group whose interests are in the physiology of reproduction at the cellular or molecular level; specifically, mechanisms of signaling and transduction, steroid hormone action, and the biology of the vascular wall. This tenure-track position offers an opportunity to teach at the undergraduate and graduate level, to interact with other departments in the medical school and to participate in university affairs. Please send résumé, two representative publications, and the names and addresses of three references before 1 May 1990 to: **Dr. Daniel H. Riddick, Chairman, Department of OB/GYN, S6415 MFU-Fletcher, MCHV, Burlington, VT 05401.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY. Ph.D., molecular biology, aquatic biology, or evolution, plus lecture and laboratory. Start 20 August 1990. Apply by 1 March 1990 to: **Personnel Office, Southwestern Oklahoma State University (SWOSU), 100 Campus Drive, Weatherford, OK 73096.** *SWOSU is an Equal Opportunity/Affirmative Action Employer.*

The Department of Biochemistry and Biophysics at the University of Pennsylvania plans to appoint an investigator in the area of structure-function studies of hemoproteins and heme enzymes with an aggregated emphasis on magnetic resonance, spectroscopic, transient kinetic, and molecular biological approaches. The appointment will be made at the level of **ASSISTANT PROFESSOR** on the research track. Please send curriculum vitae and have three letters of reference sent by 16 February 1990 to: **Dr. Franz M. Matschinsky, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104-6059.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR CELLULAR BIOTECHNOLOGY THE UNIVERSITY OF MICHIGAN

As part of the expansion of research and teaching in the area of cellular biotechnology at The University of Michigan, we are seeking a creative scientist with postdoctoral training in cellular and molecular biology to fill a tenure-track position in the Department of Microbiology and Immunology. We are particularly interested in candidates having a strong multidisciplinary background in research that involves mathematical and computer-assisted analysis of complex cellular networks with applications in cellular biotechnology. Candidates must be prepared to establish an independent research program and to participate in the teaching programs for graduate, medical, and dental students. There also are exciting opportunities for interaction with individuals in the Engineering College through the Bioengineering Program and the recently established Cellular Biotechnology Laboratories in the Department of Chemical Engineering. Applications should include curriculum vitae, list of publications, brief statement of future research objectives, and names of three individuals familiar with the candidate's research and teaching abilities. Application should be submitted by 15 March 1990 to: **Cellular Biotechnology Search Committee, Department of Microbiology and Immunology, 6643 Medical Science Building II, The University of Michigan, Ann Arbor, MI 48109-0620.**

The University of Michigan is an Equal Opportunity/Affirmative Action Employer and encourages the application of qualified women and minorities.

ASSISTANT/ASSOCIATE PROFESSOR STAFF SCIENTIST (EQUIVALENT TO ASSISTANT/ASSOCIATE PROFESSOR) SENIOR SCIENTIST (EQUIVALENT TO FULL PROFESSOR)

Weis Center for Research Geisinger Clinic

We are seeking a cell biologist, biochemist, or molecular biologist with an imaginative established research program related to mammalian cell physiology, growth, differentiation, or development. The Weis Center is a fully equipped basic research facility currently staffed by approximately 50 scientists and support personnel. The research building was completed in May 1987, and is designed to accommodate 20 separate laboratories. Scientists are provided with generous institutional funds for start-up, salaries, postdoctoral fellows, research technicians, supplies, and equipment. The Geisinger Medical Center is located in an attractive rural setting in central Pennsylvania, within driving distance of New York City, Philadelphia, and Washington, D.C. It is affiliated with the Jefferson Medical College, and there are several colleges and universities nearby. Employment should begin on or after 1 July 1990. Applications will be accepted until the position is filled. Curriculum vitae, statement of research interests, and names of three references should be sent to: **Dr. Howard E. Morgan, Senior Vice President for Research, Weis Center for Research, 26-01, Geisinger Clinic, Danville, PA 17822.** *Equal Opportunity Employer, M/F/H/V.*

POSITIONS OPEN

SAINT ANSELM COLLEGE ASSISTANT PROFESSOR OF BIOLOGY

The Department of Biology seeks applications for a nontenure position to begin September 1990 to fill a vacancy due to a faculty retirement. Ph.D. required. Subject area: genetics. The successful candidate should have a general and molecular background and demonstrate teaching experience in his/her primary area of interest. A biochemistry and microbiology background would be most beneficial. Computer proficiency is desirable. All courses include a laboratory experience and he/she will be expected to plan and conduct a quality laboratory program in assigned courses. He/she will be expected to participate in the department's Senior Directed Studies research program and in the freshman major and nonmajor biology program. Saint Anselm College is a private, 4-year, liberal arts college situated in southern New Hampshire. It is committed to excellence in undergraduate education and has approximately 1800 students. Send curriculum vitae and the names of three references to: **Dr. Daniel J. Lavoie, Chairman, Search Committee, Saint Anselm College, Manchester, NH 03102.** Application deadline: 7 February 1990.

An Equal Opportunity Employer.

ASSISTANT PROFESSOR POSITIONS CELLULAR NEUROBIOLOGY AND SYSTEMS NEUROBIOLOGY DEPARTMENT OF PSYCHOBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Applications are invited for two tenure-track positions at the level of assistant professor in cellular neurobiology and systems neurobiology. Preference will be given to applicants who have demonstrated expertise in research areas of interest to the department. The Department of Psychobiology emphasizes interdisciplinary approaches to the study of neural plasticity and behavior. The current major research themes of the department are development, reorganization following injury and disease, and learning and memory. Please submit, by 1 March 1990, curriculum vitae, description of research interests, and three confidential letters of recommendation to: **Chair, Department of Psychobiology, University of California, Irvine, CA 92717.**

UCI is an Affirmative Action/Equal Opportunity Employer.

California State University, San Bernardino, which offers B.A., B.S., and M.S. degrees in biology, invites applicants for tenure-track position in the Department of Biology, available September 1990. Appointment is at the rank of **ASSISTANT PROFESSOR/ASSOCIATE PROFESSOR** (\$28,884 to \$39,924/\$36,372 to \$50,472, respectively, based on experience). Qualifications: Ph.D. in population genetics; extensive grant-supported research, experience, and publication record utilizing *Drosophila*, *Tribolium*, or plant populations; experience in teaching general biology, genetics, and population biology at both undergraduate and graduate levels and guiding undergraduate and graduate students in research. Additional expertise in other areas, including entomology, evolution, animal behavior, symbiosis, and plant or animal population ecology, would be desirable. Deadline: 15 March 1990 or until position is filled. Submit letter of application, curriculum vitae, and three letters of recommendation to: **Dr. Alexander Sokoloff, Acting Chair, Department of Biology, California State University, 5500 University Parkway, San Bernardino, CA 92407.**

An Equal Opportunity/Affirmative Action/Section 504/Title IX Employer.

ASSISTANT/ASSOCIATE PROFESSOR. Retrovirologist, faculty position. Applications are invited for a tenure-track assistant/associate professorship in molecular virology in a department active in research in molecular pathogenesis, virology, and immunology. Applicants with expertise in the molecular characterization of retroviral systems are especially encouraged to apply. Successful applicants are expected to establish an independent research program. Teaching responsibilities include participation in courses for medical and graduate students. Candidates should submit curriculum vitae, statement of research experience (including a description of postdoctoral studies), and a list of three references to: **Retrovirology Search Committee, Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.** *An Equal Opportunity Employer.*

12 JANUARY 1990

FORMULATIONS SCIENTIST

Baxter Hyland Division, a leader in Biological Research, is seeking scientists to join its rapidly expanding Research Group.

We have newly created openings for B.S./M.S. level scientists interested in research directed toward formulation and development of novel proteins that will be used in clinical evaluations. These scientists will assist in product formulation and dosage form development, monitor product stability and evaluate delivery systems. Specific research areas include protein biochemistry, formulation, and lyophilization.

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We offer a smoke-free work environment. Employment consideration is contingent on the result of a drug screening test. Salary requirement must be stated for consideration. Please forward call or forward your resume to: **Baxter Hyland Division, Human Resources, Dept. (MS), 4501 W. Colorado Blvd., Los Angeles, CA 90039. (818) 507-8394.** An Equal Opportunity Employer.

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DEAN

COLLEGE OF SCIENCE AND TECHNOLOGY

The University of Southern Mississippi invites applications and nominations for the position of **DEAN OF THE COLLEGE OF SCIENCE AND TECHNOLOGY.** One of three comprehensive universities operated by the State of Mississippi, USM has an enrollment of 13,000 and a faculty of over 600. Located in the south central part of the state, the University enjoys many advantages by virtue of its proximity to New Orleans, Mobile, Jackson, and the Mississippi and Florida coasts.

The College of Science and Technology, one of six colleges in the University, has 144 faculty and approximately 1800 undergraduate and 300 graduate majors. It is organized into one school and ten departments. The departments include Biological Sciences, Chemistry and Biochemistry, Computer Science and Statistics, Geology, Marine Science, Mathematics, Medical Technology, Physics and Astronomy, Polymer Science, and Science Education. Administered by the College is the School of Engineering Technology which includes programs in Architectural, Computer, Construction, Electronics, Industrial, Mechanical Engineering Technology and, at the graduate level, Manufacturing Technology. The doctoral degree is offered by Biological Sciences, Chemistry and Biochemistry, Polymer Science, and Science Education. New doctoral degrees in Marine Science and Computational Science are currently being reviewed by the Board of Trustees of Institutions of Higher Learning. Eleven academic units offer the master's degree.

Qualifications for the position include an earned doctorate in a discipline within the College of Science and Technology or a related discipline, evidence of professional leadership, a record of sustained scholarly achievement, evidence of ability to secure and develop research funding, and experience in administration or related activities.

Salary, rank, and tenure status will be commensurate with qualifications and experience. Effective date of appointment will be July 1, 1990, or as negotiated.

Applications, nominations, and inquiries will be received in confidence. A letter of application, résumé, and the names, addresses, and telephone numbers of three references should be sent to the address below. Applications received after February 1, 1990, cannot be guaranteed consideration.

**COST Dean Advisory Search Committee
University of Southern Mississippi
Southern Station Box 5002
Hattiesburg, MS 39406-5002**

AA/EEO.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF)

The Division of Oral Biology, Department of Stomatology, School of Dentistry, invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. Minimum requirements include a Ph.D., D.D.S., or M.D. and at least 2 years of postdoctoral experience. The successful applicant will teach in the lecture and laboratory portions of human gross anatomy, as well as in other courses, and in the graduate program. Establishment of an independent research program is expected. Preference will be given to candidates who have demonstrated exceptional ability in cellular/molecular biology. Nominations, or applications, with three letters of recommendation, current curriculum vitae, and a short summary of research plans should be sent by 1 March 1990 to: Susan J. Fisher, Ph.D., Division of Oral Biology, HSW 604, University of California, San Francisco, CA 94143-0512. UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

OPPORTUNITIES IN ENVIRONMENTAL RESOURCES/ REMOTE SENSING

The Department of Environmental Resources, Cook College, Rutgers University, a multidisciplinary department focusing on environmental and natural resource planning and management issues, has two 12-month, tenure-track faculty positions available 1 July 1990. The successful candidate will be expected to establish a vigorous research program and participate in an appropriate graduate program.

• **ASSISTANT PROFESSOR OF FOREST HYDROLOGY/FOREST MANAGEMENT.** The position requires a Ph.D. with at least one degree in forestry and specific education and/or experience in watershed management, remote sensing, and/or geographic information systems. Teaching responsibilities will include a course in silviculture, watershed management/remote sensing, and participation in a multidisciplinary air photo interpretation course.

• **ASSISTANT PROFESSOR OF ENVIRONMENTAL PLANNING AND MANAGEMENT.** The position requires a Ph.D. in environmental planning, environmental management, or a related field with at least one degree in a physical or biological science. Teaching responsibilities will include an undergraduate two-semester course in environmental planning and a course in environmental management. Research experience should be in the area of land or water resources and/or geographic information system development or applications.

Applications, including a letter of interest, curriculum vitae, brief summary of research interests and goals, and names of three references, should be sent to: Diane S. Reed, Search Committee Coordinator, Department of Environmental Resources, Cook College, Rutgers University, P.O. Box 231, New Brunswick, NJ 08903. Cook College, Rutgers University, is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE FULL PROFESSOR (QUANTITATIVE PLANT ECOLOGIST). Tenure-track, split appointment between the Department of Range, Wildlife, and Forestry (75%), and the Biological Sciences Center, Desert Research Institute (25%), University of Nevada. The assignment will be 25% teaching and 75% research.

A Ph.D. in a field of ecology or natural resources management with specialization in forest or range ecology is required. A strong quantitative background, the proven ability to attract research funding, teaching experience, and a record of published research in professional, peer-reviewed journals are necessary. Postdoctoral experience is desirable.

Send letter of application, college transcripts, curriculum vitae, statement of research and teaching interests, copies of publications, and three letters of reference by 15 March 1990 to: Dr. Roger F. Walker or Dr. J. Wayne Burkhardt, Search Committee Co-Chairmen, University of Nevada Reno (UNR), Department of Range, Wildlife, and Forestry, 1000 Valley Road, Reno, NV 89512. Telephones: R. F. Walker, 702-784-4039; J. W. Burkhardt, 702-784-4609. Affirmative Action/Equal Opportunity Employer. UNR employs only U.S. citizens and aliens lawfully authorized to work in the United States.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) DEPARTMENT OF PHYSIOLOGY CENTRAL NERVOUS SYSTEM (CNS) TENURE-TRACK POSITION

The Department of Physiology of the UCLA School of Medicine invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** from individuals with a strong interest in the central nervous system. Applicants will be expected to develop an independent research program and to participate in graduate and medical school teaching. Candidates should send curriculum vitae, a statement of research activities and interests, and the names of three references to:

Dr. Alan Grinnell
CNS Search Committee
Department of Physiology
UCLA School of Medicine
Los Angeles, CA 90024-1751

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

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) DEPARTMENT OF PHYSIOLOGY VASCULAR TENURE-TRACK POSITION

The Department of Physiology is seeking to recruit an outstanding individual for a tenure-track position at the **ASSISTANT PROFESSOR** level. Applicants must have demonstrated abilities and interests in areas of vascular research including any of the following: development or adaptation of smooth muscle, molecular biology of vascular smooth muscle proteins, signal transduction processes in vascular endothelium or in smooth muscle fibers, and biochemical regulation of smooth muscle membrane channels. Successful candidates are expected to have a Ph.D. or M.D. with postdoctoral experience and should provide evidence that they can pursue a vigorous independent research program and participate in an active teaching program in the cardiovascular field.

Resources and an excellent environment exist for developing an academic career within an interactive community. Interested scientists should mail their curriculum vitae, a statement of current interests and future research plans, and relevant reprints or preprints, and arrange to have at least three letters of reference sent to:

Julio Vergara, Ph.D.
Chair, Vascular Search Committee
Department of Physiology
UCLA School of Medicine
Los Angeles, CA 90024-1751

The period for application closes 1 April 1990. The University of California is an Equal Opportunity/Affirmative Action Employer.

The Biology Department at San Diego State University (SDSU) invites applications for four tenure-track positions to begin, at the earliest, August 1990, preferably at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Successful candidates will be expected to develop an independently funded research program and to participate in the training of graduate students and in the teaching programs of the department.

DEVELOPMENTAL IMMUNOLOGIST: using molecular approaches in the study of the development of cells of the immune system.

PLANT POPULATION GENETICIST: with an evolutionarily oriented research program addressing processes and patterns at or below the species level, such as speciation, gene flow, and reproductive mechanisms.

MICROBIOLOGIST: experienced in bacteriology, using modern molecular tools to address an area such as plant-bacterial interactions, bacterial degradation of toxic chemicals, or animal-pathogen interactions.

MARINE MAMMAL SYSTEMATIST/EVOLUTIONIST: able to interact with faculty working in whole animal biology, systematics, and evolution.

Postdoctoral research experience required. By 15 February 1990, applicants should submit curriculum vitae, statement of research and teaching interests, copies of recent publications, and the names and addresses of three references to: (the appropriate) Search Committee, Biology Department, San Diego State University, San Diego, CA 92182-0057. Applications from women, ethnic minorities, and disabled individuals are especially encouraged. SDSU is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF MICROBIOLOGY

Applications are invited for a 12-month tenure-track position at the rank of assistant professor in the Department of Pathobiology at the University of Pennsylvania, School of Veterinary Medicine. The appointment will be made in the Laboratory of Microbiology, Division of Pathobiology, starting in July 1990. The successful candidate will be expected to have expertise in and conduct research in the area of the molecular and/or cellular basis of bacterial pathogenesis. Teaching responsibilities involve participation in a team-taught core microbiology course for veterinary students. In addition, the candidate will have the opportunity to participate in a joint graduate education program administered by the combined biomedical faculty of the University of Pennsylvania. Applicants must have a Ph.D., D.V.M., or M.D. degree and should have a demonstrated record of research productivity as well as a strong potential to develop an externally funded research program. Applications will be reviewed as of 1 March 1990 and thereafter until the position is filled. Please send curriculum vitae, a statement of research interests, and the names, addresses, and telephone numbers of three referees to: Dr. Leonard J. Bello, Chairman, Microbiology Search Committee, Department of Pathobiology, University of Pennsylvania, School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, PA 19104. An Equal Opportunity, Affirmative Action Employer.

ASSISTANT PROFESSOR OF PHYSIOLOGY

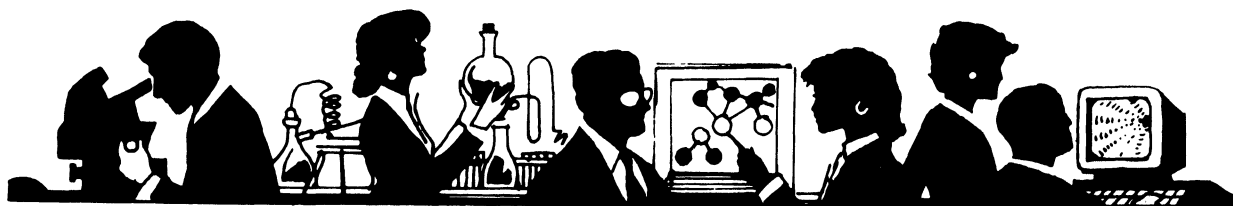
Applications are invited for a tenure-track position in the Department of Physiology and Endocrinology, Medical College of Georgia. Candidates must have a Ph.D. or M.D. degree and postdoctoral training. Research competence in one of the following areas is sought to complement existing strengths in skeletal and cardiac muscle, pulmonary circulation, and membrane transport. The candidate is expected to develop an independent and externally fundable research program, and to participate in medical and graduate teaching. A statement of research interests and teaching experience and the names of three references should be sent by 28 February 1990 to: Dr. Robert E. Godt, Department of Physiology and Endocrinology, Medical College of Georgia, Augusta, GA 30912-3000. The Medical College of Georgia is an Equal Opportunity/Affirmative Action Employer.

INSTRUCTOR/ASSISTANT PROFESSOR. Position open immediately for instructor/assistant professor in the Department of Radiology at The University of Texas Southwestern Medical Center at Dallas. Position includes research in NMR microscopy (both imaging and spectroscopy) of experimental and human tumors. Qualifications include an M.D. or Ph.D. degree and advanced training and work experience in the biological effects of radiation and in clinical cancer research. The successful candidate should have an extensive background in pathology. Salary range \$30,000 to \$35,000. Curriculum vitae required. Contact: Peter Antich, Ph.D., The University of Texas Southwestern Medical Center, Radiology, 5323 Harry Hines Boulevard, Dallas, TX 75235-9058. An Equal Opportunity/Affirmative Action Institution.

AQUATIC/PHYSIOLOGICAL ECOLOGIST. A tenure-track opening at the assistant professor level is anticipated in an expanding Department of Bioscience and Biotechnology. The successful applicant will be expected to initiate and carry out an externally funded program of research, to direct graduate students, and to teach graduate and undergraduate courses in ecology and in areas of interest such as aquatic ecology, limnology, or physiology. The area of research is open. Start-up funds, laboratory space, and excellent analytical facilities are available. Drexel is a member of the New Jersey Marine Science Consortium and has access to field sites in the New Jersey and Pennsylvania areas. Faculty interact with ecologists at other area institutions. Salary is competitive.

Initial screening for the position will begin on 15 February 1990 and continue until a successful candidate is found or until 31 August 1990. Submit applications, curriculum vitae, and names of three references to: Dr. Wayne Magee, Head, Department of Bioscience and Biotechnology, Drexel University, Philadelphia, PA 19104. Drexel University is an Equal Opportunity/Affirmative Action Institution and invites applications from women and minorities.

At Burroughs Wellcome Co. we create an environment in which individual initiative can flourish...as our 1988 Nobel winners have attested. We believe such freedom is the strength of our company...using the talents of our people whatever their field of endeavor.



GREAT PEOPLE MAKE A GREAT COMPANY

Research Scientist II

Pos.#61539-5: The Division of Experimental Therapy has an opening for an individual who will support pharmacokinetic and metabolism studies of anti-HIV compounds. The successful candidate will design and execute experimental protocols, conduct **in vitro** and **in vivo** experiments, perform spectrophotometric, chromatographic and radioisotopic analysis.

This position requires a Ph.D. in Biology, Biochemistry, Chemistry or related life science or a Master's degree in the above fields plus two years laboratory experience which must include work with analytical procedures, chromatographic techniques, radioisotopes and **in vivo** procedures or a Bachelor's degree in the above fields plus four years laboratory experience in the techniques mentioned above. Experience with data acquisition and reduction devices preferred.

Postdoctoral Fellows

Postdoctoral Fellows are initially appointed for up to 52 weeks with a renewal for a second year upon the mutual agreement of the employee and Burroughs Wellcome Co.

Pos.#61574-5: The Division of Experimental Therapy has an opening for an individual who wants to join a research effort in antisense RNA directed at neoplastic disease. This position requires a Ph.D. in Biochemistry, Biology, Molecular Biology or related field. Ph.D. thesis work must involve molecular biology. Cell culture experience preferred.

Pos.#61637-5: The Division of Molecular Genetics and Microbiology has an opening for an individual who will set up **in vivo** models of metastatic tumors and evaluate experimental agents in those models. The successful candidate may also investigate biochemical parameters of tumors relevant to chemotherapy. This position requires one year of experience in creating **in vivo** models of metastatic tumors and evaluation of chemotherapeutic agents on the models. A Ph.D. in the biological sciences with one year postdoctoral experience is desired.

Burroughs Wellcome Co. offers top benefit programs along with very competitive salaries. If you are interested in working for us, submit your resume, indicating position number in your cover letter, by **February 28, 1990** to: **Burroughs Wellcome Co., Scientific Recruiting and Staffing, 3030 Cornwallis Rd., Research Triangle Park, NC 27709.**

For information on job opportunities with Burroughs Wellcome Co. at Research Triangle Park, call our Job Information Line at **(919)248-8347** from any touch tone phone.



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POSITIONS OPEN

ASSISTANT PROFESSOR, DEPARTMENT OF PHYSIOLOGY, UNIVERSITY OF TORONTO. Applications invited for tenure-stream appointment. Qualifications: Ph.D. degree and postdoctoral research experience in endocrinology (including neuroendocrinology). Duties include research, training of graduate students, and teaching in undergraduate courses. Applications, including curriculum vitae and names of three referees, should be sent before 31 March 1990 to: **Dr. H. L. Atwood, Chairman, Department of Physiology, Faculty of Medicine, University of Toronto, Toronto, Canada, M5S 1A8.** *The University of Toronto 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.*

The Department of Biochemistry and Biophysics at the University of Pennsylvania is recruiting a **RESEARCH ASSISTANT PROFESSOR.** We are seeking a candidate for development of radio frequency coils for nuclear magnetic resonance detection utilizing high-temperature superconductors, development of new NMR frequency selective excitation schemes and data processing methods for NMR imaging and localization studies, development of a novel NMR 1-d flow imaging technique by a meander coil, and in vivo magnetic resonance spectroscopy studies of human metabolism. Two years of postdoctoral NMR research and a strong physics background are required. Please send curriculum vitae and have three letters of reference sent by 16 February 1990 to: **Dr. Franz M. Matschinsky, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104-6059.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGICAL NMR SPECTROSCOPISTS

The Pittsburgh NMR Center for Biomedical Research is searching for one or possibly two Ph.D.-level scientists with experience in applications of NMR spectroscopy and imaging to metabolic studies in animals. These are full-time staff appointments and salary depends on experience and qualifications. Responsibilities include collaborative interaction with medical scientists, probe construction, and development and implementation of new NMR techniques. The center is multidisciplinary involving scientists from both the University of Pittsburgh and Carnegie Mellon University. The center houses a 4.7-Tesla, 40-cm Bruker BIOSPEC II and a 2.4-Tesla rapid imaging spectrometer is under construction. In addition, center personnel have access to a 7.0-Tesla, 15-cm bore Bruker BIOSPEC II and Bruker AM-300 and AM-500 spectrometers.

Applicants should send curriculum vitae and have three letters of recommendation sent to: **Dr. Chien Ho, Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.** Review of applications will begin on 15 February 1990 and will continue until suitable candidates are recruited. *Carnegie Mellon University is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGY. The Department of Biology at Laval University invites applications for two tenure-track faculty positions. Position (i) is for a biological limnologist, preferably with expertise in microbial food webs, ecosystem modelling, or fluvial ecology. Position (ii) is for a plant physiologist, preferably with expertise in ecophysiology or physiology of stress or photosynthesis, and with an interest in terrestrial or aquatic organisms native to northern environments. Qualifications for both positions are: Ph.D. or D.Sc., preferably with postdoctoral experience; ability to teach in French within a year of appointment. Rank and salary according to collective agreement (minimum Canadian \$42,000). Send applications (with curriculum vitae and names and addresses of three referees) before 15 March 1990 to: **Chairperson, Département de biologie, Université Laval, Québec, Canada, G1K 7P4.**

CELLULAR IMMUNOLOGIST/ANIMAL VIROLOGIST. Ph.D. or equivalent for administrative/research position. Postdoctoral training and experience in management and research critical. Please forward curriculum vitae to: **John E. Craighead, University of Vermont, Burlington, VT 05405.** Applications will be accepted until position is filled. *Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

BIOGEOGRAPHER/SYSTEMATIST

The Department of Biological Sciences, University of Nevada, Las Vegas (UNLV), invites applications for a tenure-track position at rank of **ASSISTANT OR ASSOCIATE PROFESSOR.** We seek candidates who use novel approaches in the study of biogeographic and evolutionary patterns of animals or vascular plants. Approaches may include quantitative study of biogeographic patterns, development and application of quantitative and statistical methods, and the study of systematic relationships at the morphological and/or molecular levels. The successful candidate will be expected to conduct a vigorous research program. A strong commitment to both undergraduate and graduate teaching is essential. A Ph.D. in a biological science is required.

Send curriculum vitae, a brief description of research and teaching interests, reprints of representative publications, and three letters of reference to: **Dr. Joseph A. McAuliffe, Chair, Biogeography/Systematics Search Committee, Department of Biological Sciences, University of Nevada, Las Vegas, Las Vegas, NV 89154** by 16 February 1990.

The University of Nevada, Las Vegas, is an Equal Opportunity/Affirmative Action Employer. UNLV employs only U.S. citizens and aliens authorized to work in the United States.

BIOLOGY

Broadly trained biologist to teach primarily nonmajor courses. Ph.D. with specialization in either invertebrate biology, vertebrate paleontology, field zoology, or animal behavior preferred. Position is nontenure, renewable contract, and involves teaching at an off-campus site. The off-campus program includes A.A. and B.A. program at a correctional institution at Lebanon, Ohio. Off-campus courses are in the evening. Occasional courses on the main campus for majors possible. Position available fall semester 1990. Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of three references to: **Dr. Doug Burks, Biology Search Chairperson, Pyle Center, Box 1193, Wilmington, OH 45177.**

The Texas College of Osteopathic Medicine is now accepting applications for **CHAIRMAN OF THE DEPARTMENT OF ANATOMY AND CELL BIOLOGY.** The department currently has 12 faculty members whose research covers a wide variety of areas. Viable candidates should have an established research program, teaching experience (preferably medical), and demonstrated managerial skills. Applications must be received by 1 June 1990, and accompanied by curriculum vitae and a list of three individuals who may be contacted as references. Applications should be sent to:

**Dr. Paul F. Cook
Chairman, Anatomy Search Committee
Department of Microbiology and Immunology
Texas College of Osteopathic Medicine
3500 Camp Bowie Boulevard
Fort Worth, TX 76107-2690**

Texas College of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer.

DEAN COLLEGE OF NATURAL SCIENCES, MATHEMATICS, AND HOME ECONOMICS

Mankato State University (MSU) invites applications and nominations for the position of dean of the College of Natural Sciences, Mathematics, and Home Economics. The college consists of 5 departments, 105 faculty, and offers 25 undergraduate and 9 graduate programs. A doctoral degree in an appropriate academic field, proven effectiveness in teaching and research, and demonstrated administrative ability are required. Additional qualifications include active participation in curricular and professional issues and a commitment to provide leadership in the areas of scholarship, research, development, external relations, and Equal Opportunity/Affirmative Action. Applications must include a résumé and the names and addresses of three current references. Applications to: **Dr. Richard A. Crofts, Vice President for Academic Affairs, Mankato State University, MSU Box 43, Mankato, MN 56002.** Telephone: 507-389-1333. Review of applications will begin 19 February 1990, with appointment as soon after 1 July 1990 as possible.

Mankato State University is an Equal Opportunity/Affirmative Action University and strongly encourages applications from women and minorities.

POSITIONS OPEN

CHAIRPERSON of the Department of Environmental Sciences. As tenured full professor and associate director of the New Jersey Agricultural Experiment Station (NJAES) for Environmental Programs at Cook College, Rutgers, The State University of New Jersey, New Brunswick, New Jersey.

The Department of Environmental Sciences has a multidisciplinary teaching, research, and extension mission focused on the challenges to the environment. The 26-faculty-member program offers M.S. and Ph.D. degrees with specialties that include water and wastewater treatment, air pollution and industrial hygiene, soil science, fate and transport of contaminants in ecosystems, exposure assessment, and radiation. An undergraduate curriculum is offered with options in soil sciences, pollution and treatment sciences, water resources, environmental chemistry, environmental health, and radiation-nuclear sciences.

RESPONSIBILITIES: The chair will provide leadership in achieving excellence in teaching, research, and extension. The individual will be responsible for recruiting and developing an expanding faculty, facilitating multidisciplinary team research, and identifying and attracting external program funding.

The successful candidate will also serve as an Associate Director of the New Jersey Agricultural Experiment Station and will provide leadership for all NJAES research programs related to the environment.

The appointee will have a Ph.D. in a field aligned with departmental programs and have a distinguished record of grantsmanship, teaching, and nationally recognized research. Administrative experience is desirable.

Send résumé to: **Search Committee for Chairperson, Environmental Science Department, P.O. Box 231, Cook College, Rutgers, The State University, New Brunswick, NJ 08903.** *Rutgers University is an Affirmative Action/Equal Opportunity Employer. Review of applications will begin 1 January 1990.*

ANTIOCH COLLEGE

DIRECTOR OF THE INSTITUTE OF SCIENCE AND TECHNOLOGY

Antioch College seeks nominations and applications for the position of director of the Institute of Science and Technology. The institute houses all the science programs on the campus. This senior faculty position is expected to provide the academic and administrative leadership to develop undergraduate science programs of the highest quality.

The director of the institute will pay a central role in the development of the science program and in the selection of significant numbers of new science faculty. In addition, the director will provide leadership in establishing innovative research opportunities appropriate to an undergraduate liberal arts environment.

Antioch seeks applicants with superior academic qualifications, broad-based experience across a range of scientific fields, enthusiasm for undergraduate teaching and research, and the personal qualities to assume a leading role in the enrichment of science programs at Antioch College. The committee will review materials beginning 1 March 1990 and will accept applications until an appointment is made. Send letter, curriculum vitae, and three letters of reference to: **C. G. Pelekoudas, Dean of Faculty, 795 Livermore Street, Yellow Springs, OH 45387.**

ANIMAL/CELL PHYSIOLOGIST

Antioch College invites applicants for a 2-year, tenure-track appointment as **ASSISTANT PROFESSOR** of biology. Candidates should have strong interests in teaching undergraduates. Teaching responsibilities will range from animal physiology to biochemistry and will include premedical advising. Antioch is interested in individuals who might contribute to developing programs in environmental studies and cross-cultural education, as well as working with colleagues to develop major programs in biology and chemistry. Scholarship, broadly defined, and the Ph.D. are expected. The committee will review materials beginning 1 March 1990 and will accept applications until an appointment is made. Send letter, curriculum vitae, and three letters of reference to: **Professor Peter Townsend, Chair, Science Search Committee, 795 Livermore Street, Yellow Springs, OH 45387.**

Affirmative Action/Equal Opportunity Employer. Antioch does not discriminate on the basis of race, color, religion, sex, sexual orientation, national origin, age, political affiliation, marital status, or physical handicap.

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

Applications are being solicited for the position of chairperson of the Department of Biochemistry at the Medical College of Wisconsin.

The department's 20 full-time faculty members are engaged in a range of research activities, with particular strengths in protein structure-function relationships and growing strengths in molecular biology and molecular structure. Research efforts within the department are supported with approximately \$1.8 million (direct costs) of annual extramural funding. The department plays a critical role in medical student education and has an active graduate training program. It is housed in one of the college's major research facilities, adjacent to the principal instructional building and directly across the street from the three major adult and children's teaching hospitals within the Milwaukee Regional Medical Center.

This position represents an outstanding professional opportunity to guide the next phase of departmental growth and to join in the intellectual leadership of the college. The candidate we seek must possess excellent academic credentials and demonstrated skills of leadership in administration, teaching, and research.

Please submit nominations, inquiries, or curriculum vitae by 15 March 1990 to:

Roger R. Markwald, Ph.D.
Chairman, Biochemistry Search Committee
c/o Office of the Dean
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226

DEAN COLLEGE OF HOME ECONOMICS

Applications and nominations are invited for the position of dean of the College of Home Economics. The college, comprising of the Departments of Child and Family Development, Foods and Nutrition, Housing and Consumer Economics, and Textiles, Merchandising, and Interiors, is one of 13 colleges and schools at the University of Georgia. The dean serves as chief administrative officer over all of the college's programs.

Candidates must have: a doctorate degree in one of the disciplines represented in the college, an exemplary record of teaching and scholarship, and experience in higher administration. The position becomes available after 1 July 1990. Applications must include curriculum vitae plus names and addresses of five references. Applications received by 1 March 1990 are assured of full consideration. Send correspondence to: **Dean Gordhan L. Patel, Chairman of the Search Committee, The Graduate School, The University of Georgia, Athens, GA 30602.**

FACULTY POSITION IN CARDIOVASCULAR RESEARCH

The Department of Anesthesiology, Baylor College of Medicine, invites application for an appointment at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Candidates should have experience in conducting research in awake instrumented animals and an interest in microcirculation. Candidates should have Ph.D. or an M.D. degree, postdoctoral training, and a strong commitment to developing independent research. Applications including curriculum vitae, representative reprints, names of three references, and a brief description of research interest should be sent to: **Joseph P. Buckley, Ph.D., Institute for Cardiovascular Studies, University of Houston, Texas Medical Center, 1441 Moursund, Houston, TX 77030. Equal Opportunity/Affirmative Action Employer.**

GENETICS/EVOLUTIONARY BIOLOGY

ASSISTANT PROFESSOR, tenure-track position. Ph.D. required; teaching experience and postdoctoral research experience preferred. Teaching duties will include general genetics with laboratory and an evolution course for senior biology majors. Candidate is expected to establish a research program involving graduate and undergraduate students. Submit résumé, statement of teaching philosophy, research plans, and three references by 1 March 1990 to: **Dr. Bonnie Sampell, Chairman, Biology Department, State University College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222. Buffalo State College is an Equal Opportunity/Affirmative Action Employer.**

Research Scientist Animal Model

Corvas, Inc., a biopharmaceutical company located in the biomedical research center of La Jolla, is expanding to address exciting product opportunities in the thrombosis field. We are seeking outstanding scientists to join our drug discovery and development effort.

You will develop and validate animal models for thrombosis and evaluate the efficacy of novel therapeutic agents. The position requires a Ph.D. in animal physiology or biological sciences, 2+ years of experience with animal models of human disease and skills in conducting biochemical assays.

Corvas offers attractive salaries and benefits, an excellent opportunity for equity participation and a highly interactive scientific environment. For consideration, please send letter of interest and CV to: **Human Resources Director, Corvas, Inc., 11077 North Torrey Pines Road, La Jolla, CA 92037.**

Corvas, Inc.

RESEARCH DIRECTOR

C.R. Eggs, Inc., a nationally branded egg producer, is seeking a Director of Research and Quality Control. This person will initiate clinical trials, monitor chemical tests and coordinate research data dealing with product efficacy and related claims.

The candidate will have Ph.D. in toxicology, biochemistry or a related discipline and 4 to 5 years' experience in industry, government or an academic environment. Regulatory experience related to food safety and nutrition is a plus. Applicants should be motivated, self-assured and able to work independently.

For the qualified person, the company is prepared to make adjustment in activity to accommodate the commitment of the candidate to a part-time arrangement, if necessary.

This position offers salary commensurate with qualifications and experience, and the opportunity to participate in equity growth of the company. Interested scientists should send a résumé, writing sample and three references to:



Chairman,
C.R. Eggs, Inc.
500 North Gulph Road
King of Prussia, PA
19406

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If you're prepared to participate in next-generation product development with an internationally recognized leader, look to Applied Biosystems. Dynamic and team-driven, we foster an open environment where your ideas are more than encouraged—they will set the direction for a future that impacts us all.

Located in the hub of technical and biotechnical excellence, we provide cutting-edge systems and tools for biotechnology research. Today, our continued growth means new opportunity for self-motivated, creative thinkers committed to advancing the boundaries in scientific and technical achievement.

GROUP LEADER PROTEIN SEQUENCING

Charged with directing chemistry R&D projects within our protein sequencer product group, you will participate in the development of new chemistries and hardware for protein primary structural analyses. You will also promote our scientific leadership by contributing to publications and participating in lectures.

Your PhD in Biochemistry, Chemistry, or equivalent, must be backed by 3+ years' experience in protein sequencer operations including 2 years' in a laboratory supervisory role. Published works in the area of protein structural analysis is imperative. Excellent communication skills essential. (Ref. #89-102)

We offer competitive salaries and benefits, including relocation assistance. For immediate consideration, please send your resume indicating Ref.#, to ABI, Professional Employment, 850 Lincoln Centre Drive, Foster City, CA 94404. We are an equal opportunity employer m/f/h/v.



PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL CANCER INSTITUTE

A Senior Executive Service Vacancy

ASSOCIATE DIRECTOR

**Cancer Prevention Research Program
Division Of Cancer Prevention And Control**

Location: Rockville, Maryland

The Associate Director, Cancer Prevention Research Program, will be responsible for the overall planning, coordination and monitoring of a worldwide Cancer Prevention Program designed to provide prompt evaluation of new leads in cancer prevention. The Cancer Prevention Research Program has a staff of approximately 46 who administer a large intramural and extramural program with a budget of approximately \$36 million annually.

This is a Civil Service position in the Senior Executive Service (SES) with an annual salary compensation between ES-1 through ES-4 (currently \$68,700 to \$76,400 per annum). In addition, physicians may be eligible for a Physician's Comparability Allowance up to \$20,000 per year. (Applicants alternatively may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one-year probationary period.

Applicants must meet the minimum educational requirements for Medical Officer, GS-602. Applicants must further meet established mandatory professional/technical and managerial/executive requirements. Applicants will be further evaluated on the degree to which they possess additional desirable qualifications in the areas of professional/technical qualifications, managerial/executive qualifications, scientific reputation/peer recognition, training and education, and honors and awards. A copy of the requirements may be obtained by contacting Ms. Dolores Guido in the Personnel Management Branch, NCI, at (301) 496-8182.

Applications for Federal Employment (SF-171), are to be sent to the above individual at:

**The National Cancer Institute
Personnel Management Branch
9000 Rockville Pike
Building 31, Room 3A19
Bethesda, Maryland 20892**



A current curriculum vitae and bibliography must accompany all applications for entrance into the SES. Resumes are not acceptable applications for entrance into the SES. Public Health Service Commissioned Officers wishing to enter the SES must follow the above procedures. Officers interested in performing the duties of the position *within the Commissioned Corps* may submit a resume to the above address.

Applications must be received by February 2, 1990.

SELECTION FOR THIS POSITION WILL BE BASED SOLELY ON MERIT, WITH NO DISCRIMINATION FOR NON-MERIT REASONS SUCH AS RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN, POLITICS, MARITAL STATUS, PHYSICAL HANDICAP, AGE, OR MEMBERSHIP OR NON-MEMBERSHIP IN AN EMPLOYEE ORGANIZATION.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

CANCER RESEARCH INSTITUTE INVESTIGATORSHIPS

The Cancer Research Institute is planning to grant its Investigator Award to a minimum of five qualified immunologists in 1990. The award is \$50,000 per year for four years and may be used at the discretion of the recipient for salary, technical assistance, supplies, or capital equipment. The Cancer Research Institute does not provide funds for administrative overhead. Awards will be activated July 1, 1990.

Candidates must hold a Ph.D. or M.D. degree, be serving in their first or second year as Assistant Professor or the equivalent (or expect to be appointed to such position by July 1, 1990), and be working in the field of fundamental immunology or tumor immunology in the United States or abroad.

Applicants are asked to submit ten copies of both their c. v. and a four-page summary of their research plans to:

**Ms. Ursula Hahn
Grant and Fellowship Administrator
Cancer Research Institute
133 East 58th Street
New York, NY 10022**

In addition, applicants must arrange for three letters of reference to be sent directly to the above address. All materials must reach the Cancer Research Institute by April 1, 1990.

DIRECTOR

BIOTECHNOLOGY INSTITUTE FOR TECHNOLOGY TRANSFER University of Florida, Gainesville, FL

The University of Florida is seeking an outstanding leader and scholar to direct the Biotechnology Institute for Technology Transfer at the University of Florida Research and Technology Park. The University is a comprehensive research institution with over \$161 million in annual research funding and more than 300 faculty actively involved in biotechnology research. The Director of the Biotechnology Institute reports directly to the Vice President for Research and has the mandate to facilitate and oversee emerging biotechnology companies at the Research Park and to lead in biotechnology transfer from the University to industry. Major responsibilities include identifying commercially significant research at the University; establishing partnerships with industry to develop commercially valuable biotechnology discoveries; marketing biotechnology patents and discoveries to commercial firms; providing and managing Research Park facilities which join the University to industry in order to develop commercially viable products.

Applicants must have demonstrated experience in successful technology transfer; a background in successful administrative leadership; Ph.D. preferred or post baccalaureate degree with research experience; scientific proficiency in biotechnology essential; demonstrated ability to negotiate and obtain funding at the highest administrative levels of business, industry and government; sensitivity toward and ability to work with diverse groups; commitment to affirmative action and equal opportunity. Salary will be commensurate with the experience and qualifications of the individual selected.

Applicants must submit a letter of application that addresses each of the responsibilities of the position, a current curriculum vitae, and the names, addresses and telephone numbers of three references. Nominations and applications should be sent to: Ms. Roxanna Bruce, Office of the Vice President for Research, 223 Grinter Hall, University of Florida, Gainesville, FL 32611-2037. *Deadline for Receipt* of completed applications: February 1, 1990. The University of Florida is an Equal Employment Opportunity/Affirmative Action Employer.



WATERFOWL / WETLANDS ECOLOGIST

Position opening for 12-month tenure-track appointment at the Assistant or Associate Professor level. Rank will be dependent on qualifications. Teaching assignment—25%; normally includes waterfowl biology and seminar on wetlands ecology. Research assignment—75%; with the Cooperative Wildlife Research Laboratory conducting investigations and training graduate students in waterfowl biology and/or wetlands ecology. Ph.D. in Wildlife Biology/Ecology, Zoology or a related area required. The ability to plan, conduct and publish research, to write proposals and obtain external funding, and knowledge about dealing with state and federal agencies all are desirable; preference will be given to those with demonstrated success in these areas. Salary will be commensurate with qualifications and experience. Applications should include: (1) a curriculum vitae, (2) undergraduate and graduate transcripts, (3) copies of all published papers, (4) a detailed statement of research interests, (5) copies of research proposals submitted for funding, (6) three letters of recommendation, and (7) the names, addresses, and telephone numbers for two additional persons who may be contacted to discuss the applicant's ability and potential to fill this particular position. Women and minority candidates are urged to apply. Deadline for receipt of applications: February 15, 1990. Position starts July 1, 1990. Send application materials to:

Dr. Alan Woolf, Chair, Selection Committee
Department of Zoology, Life Science II
Southern Illinois University at Carbondale
Carbondale, IL 62901.

SIUC is an Equal Opportunity/Affirmative Action Employer.

CLINICAL RESEARCH ASSOCIATES

Amgen, an innovative leader in the discovery and development of human pharmaceutical products through applied biotechnology, is currently seeking several experienced Clinical Research Associates to assist in the monitoring and evaluation of new and ongoing clinical studies. Responsibilities for these positions will include assisting in the implementation, monitoring and supervision of clinical studies. Related responsibilities may also include assisting in the development of clinical protocols, case report forms and preparation of other study documents.

Qualified candidates must have a B.S. degree in the sciences or a BSN or RN and a minimum of one year of experience in clinical research or the pharmaceutical industry. Willingness to travel frequently is essential. Knowledge of FDA regulations and computer familiarity are preferred.

Amgen offers a stimulating and challenging work environment on the leading edge of pharmaceutical development as well as an excellent compensation and benefits package including the opportunity for equity participation. If you have the necessary skills and qualifications and would like the career challenges that only a fast-paced, growing organization can offer, please send a resume, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #503
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

Program Manager, Oceanic Biology

The Office of Naval Research (ONR) is seeking a highly qualified individual to plan and manage a sponsored research program in the broad field of oceanic biology. The research sponsored is conducted principally at universities and government and industrial laboratories by leading scientists in the field. This is a Civil Service position at the GM-14 or GM-15 level (\$48,592 - \$74,303), depending upon qualifications.

Responsibilities for managing the program include conceiving, organizing and directing research and development programs in new areas of oceanic biology. Applicants should have research experience in areas such as bio-optics, bioluminescence, sensory capabilities of marine organisms, and environmental biology and organism influences on particle dynamics. The incumbent will identify new research opportunities, evaluate and select research proposals for funding, manage funding resources, communicate ONR's interests to the scientific community, and represent the program within the Navy and DoD. This position provides the challenge and opportunity to have a significant impact on the direction and quality of research at the national level.

Applicants must have at least one year of specialized experience although a PhD or equivalent in Oceanography or a related discipline and one year of specialized experience is preferred. To be qualifying, this experience must have been at a level of difficulty and responsibility equivalent to that of the next lower grade level in the Federal Service. Demonstrated ability to interact with senior scientific and managerial officials is preferred.

Interested persons should send a resume, list of publications, and a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to:

OFFICE OF THE CHIEF OF NAVAL RESEARCH
Civilian Personnel Division, Code 01242P
Attn: Announcement #90-02 (S)
800 North Quincy Street Arlington, Virginia 22217-5000

Applications will be accepted through 28 February 1990 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

U.S. Citizenship Required

An Equal Opportunity Employer

Assay Development

We are seeking a PhD-level biochemist or molecular biologist to work on the development of new medical diagnostic tests for viral diseases based upon a unique nucleic acid probe technology. Prior experience (at least 2 years) in the development and market introduction of new products in medical diagnostics is essential. Strong interpersonal skills and the ability to work within a team setting are crucial to this position. Please send resume to: Personnel Department, Chiron Corporation, 4560 Horton Street, Emeryville, CA 94608 (Position NAC-208). No calls, please.



DIRECTOR LAWRENCE HALL OF SCIENCE

The University of California at Berkeley invites applications for the position of Director, Lawrence Hall of Science. The Hall is internationally recognized for innovative science education at the elementary and secondary levels. Its well-established programs include curriculum development; public programs and exhibits; teacher in-service training; pre-college courses in science and mathematics; educational research; and collaborative programs with schools to prepare students for higher education.

Applicants should have a doctoral degree or equivalent experience. Administrative ability is essential—the Director must be able to inspire and maintain a wide variety of activities at this vigorous science center. The Director must work closely and easily with the public, schools, community groups, and academic units on the Berkeley campus. Successful experience in working with governmental agencies, corporations, and foundations is desirable as well as knowledge of science and mathematics education. Leadership of the science center requires long-range planning for the Hall's development, fund-raising to support these plans, and integration of the Hall's activities with the University's academic program.

Salary and benefits will be commensurate with the responsibilities of the position and negotiated on the basis of experience.

Send letter of application, vita, names of at least three references, and a brief statement of reasons for interest in the position, as well as any supplemental information to:

Chair, Director's Search Committee
Lawrence Hall of Science
University of California at Berkeley
c/o Office of the Chancellor
200 California Hall
Berkeley, California 94720

Application Deadline: March 1, 1990.

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

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA RIVERSIDE (UCR) DIRECTOR NEUROSCIENCE PROGRAM

Applications and nominations are invited for the position of director of the Interdepartmental Neuroscience Program at the University of California, Riverside. Qualifications for the position include: distinguished scholarly achievement, an established program of research, a demonstrated ability to work successfully with federal funding agencies, commitment to excellence in teaching, and the vision and leadership skills to guide the program to its goals of excellence in research and education.

The successful candidate will be appointed with tenure as associate or full professor; however, our preference is to appoint an outstanding senior-level professor. The appointment will be made to one or more departments participating in the program: biomedical sciences, biology, chemistry, entomology, psychology.

The current neuroscience group consists of 14 faculty members and has strength in the areas of chemical signalling, synaptic transmission and plasticity, genetics, developmental neurobiology, cellular and molecular neurobiology, and sensory processes and behavior. The University of California at Riverside is the fastest growing of the University of California campuses and the program in neuroscience is expected to share in that growth.

Review of applications will begin 1 March 1990. Applications received after that date will be considered if an appointment is not made from the original pool of applicants. The starting date can be arranged; however, September 1990 would be desirable. Candidates should send curriculum vitae and names of four references to: **Chair of Neuroscience Search Committee, Box M, Neuroscience-075, University of California, Riverside, CA 92521.** Informal inquiries to: **Dr. John Ashe, telephone: 714-787-5792.**

UCR is an Equal Opportunity/Affirmative Action Employer. Minority and female applicants are encouraged to apply.

ECOLOGIST. Warren Wilson College, a liberal arts college in the Appalachian Mountains near Asheville, North Carolina, seeks to fill a permanent position in environmental studies/biology. Requires: Ph.D. with proven teaching and research skills and expertise in an area of field ecology, with preference to generalists. Teach senior-level ecology, introduction to environmental studies, wilderness field course. Send letter and curriculum vitae by 23 February 1990 to: **Dr. Paul Bartels, Box 5032, Warren Wilson College, Swannanoa, NC 28778-2099.** *Affirmative Action/Equal Opportunity Employer.*

ECOLOGIST/BOTANIST. Applications invited for retirement replacement; nontenure-track but stable position at the **ASSISTANT PROFESSOR** level; beginning last week of August 1990. Ph.D. required. Teaching for majors in ecology, field botany, limnology, off-campus field biology, and courses for nonscience majors. Undergraduate department has six faculty and offers a major in environmental science in addition to a major in biology. Facilities are exceptional and include outdoor resources. Send curriculum vitae, letter of interest explaining competence to teach courses, and names, addresses, and phone numbers of three references to: **Dr. C. E. Harms, Chair, Department of Biology, Westminster College, New Wilmington, PA 16172.**

EVOLUTIONARY BIOLOGIST. Louisiana State University (LSU) Museum of Natural Science invites applications for an anticipated tenure-track position for **CURATOR/PROFESSOR (ASSISTANT LEVEL)** to begin 13 August 1990. Ph.D. and curatorial experience required. Research interest in herpetology preferred, but those studying other vertebrates are encouraged to apply. Duties include museum-oriented research in evolutionary biology (such as molecular or morphological approaches to systematics, biogeography, speciation, cospeciation, or geographic variation), curation in one of the museum's collections, teaching one course per year, and graduate training. Submit statement of research and teaching interests, curriculum vitae, representative reprints, and names and addresses of three references to: **Dr. R. M. Zink, Museum of Natural Science, LSU, Baton Rouge, LA 70803.** Applications will be accepted until 23 February 1990 or until a suitable candidate is located. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

COMPUTATIONAL CHEMISTRY AT THE UNIVERSITY OF FLORIDA. A position of **ASSISTANT RESEARCH SCIENTIST** is open starting in fall 1990 at the Chemistry Department. This is a continuing, nontenure-accruing faculty appointment allowing promotions through the research scientist career ranks. Ph.D. in chemistry or a related discipline is required. Competence is expected in several operating systems (UNIX, VM/CMS, MS.DOS), large-scale FORTRAN computing, graphics, and computer networking (TCP/IP, Ethernet). Knowledge of vector and parallel processor methodologies is highly desirable. Duties involve supervision and administration of computer services in the department, upkeep and improvement of hardware, software and documentation, and providing technical assistance. Collaboration with other faculty in research and teaching-oriented activities will be expected and supported. This position is strongly involved with the Quantum Theory Project, a large and very active group of theoretical/computational researchers, and offers ample opportunity for professional development. The person in this position will also be influential in the substantial development of computer-related instruction at the undergraduate and graduate levels. Salary is dependent on qualifications. Applicants should submit curriculum vitae and arrange to have three letters of recommendation sent to: **Computational Chemistry Search, c/o Professor David A. Micha, 369 Williamson Hall, University of Florida, Gainesville, FL 32611.** The deadline for applications at the University of Florida is 15 February 1990. *Qualified minority and women candidates are strongly encouraged to apply.*

CRYSTALLOGRAPHER TENURE-TRACK FACULTY POSITION SCHOOL OF MEDICINE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The Department of Biochemistry invites applications from macromolecular x-ray crystallographers. Appointment rank to be determined by experience. Equipment available includes an area detector system as well as access to supercomputing and computer graphics. Generous start-up funds are available. Successful applicants will be expected to develop an active research program in structural molecular biology and to participate in departmental teaching. Interested crystallographers should send résumé with statement of research goals, names of at least three references, and two reprints to: **Dr. Mary Ellen Jones, Search Chair, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, NC 27599-7260.** Review of applications will start on 15 February 1990. *Minority and female scientists are encouraged to apply. Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN FISHERIES BIOLOGY

The Department of Biology at Southwest Missouri State University anticipates a tenure-track position for an **ASSISTANT PROFESSOR** beginning August 1990. Applicants must possess a Ph.D. in biology with a specialization in ichthyology and a primary interest in fish management. Teaching responsibilities will include a nonmajors course in general biology and courses in fisheries management. The successful candidate will be expected to develop a funded research program. Applicants should send curriculum vitae, transcripts, and names of three references by 1 March 1990 to: **Dr. Robert Wilkinson, Biology Recruitment Committee, Department of Biology, Box 148, Southwest Missouri State University, Springfield, MO 65804.**

An Affirmative Action/Equal Opportunity Employer.

JUNIOR FACULTY MEMBER (INSTRUCTOR) to conduct advanced research in molecular neurobiology. Position available immediately. Must have Ph.D. degree in relevant basic science discipline, and at least 1 year of postdoctoral training. Will join NIH-funded project involving electrophysiological recordings from dopaminergic neurons. Applicant should have experience with intracellular and patch clamp recordings from dopaminergic neurons, and ability to write computer programs for data acquisition and analysis. Send résumé and names of three references to: **Dr. D. German, Department of Psychiatry, University of Texas Southwestern Medical Center, Dallas, TX 75235-9070.** *We are an Equal Opportunity Employer.*

POSITIONS OPEN

HARVARD UNIVERSITY FACULTY POSITION IN MECHANICAL SYSTEMS

Applications are invited for a junior or senior faculty position in mechanical or electromechanical systems. Research interests of the candidate may include the analysis, design, fabrication, and integration of sensors, actuators, and controllers. Candidates specializing in small-scale systems and their applications are of particular interest. The candidate should have a Ph.D. in mechanical engineering or a related field, outstanding research accomplishments, and a strong commitment to undergraduate and graduate teaching. *Harvard University is an Equal Opportunity/Affirmative Action Employer. Applications from qualified women and members of minority groups are particularly encouraged.* Candidates should submit curriculum vitae including a list of publications and the names of three references before 1 March 1990 to: **Professor Thomas A. McMahon, Division of Applied Sciences, Pierce Hall 235, Harvard University, Cambridge, MA 02138.**

FACULTY POSITIONS IN MOLECULAR BIOLOGY/BIOCHEMISTRY OREGON GRADUATE INSTITUTE OF SCIENCE AND TECHNOLOGY (FORMERLY OREGON GRADUATE CENTER)

FUNGAL/YEAST MOLECULAR BIOLOGIST: Research interests in gene expression/regulation, cellular processes such as protein translocation, or the genetics of industrial organisms.

MICROBIAL BIOCHEMIST: Background in biochemistry, enzymology, and/or molecular biology with research interests in degradation/transformation, metabolic regulation, or the synthesis of natural products.

Requirements: Ph.D., several years of postdoctoral experience, and ability to develop a strong research program and graduate-level courses in areas of specialty. Appointments will be made at the level of **ASSISTANT PROFESSOR** or higher depending on qualifications.

Send curriculum vitae, a statement of research interests, and the names, addresses, and phone numbers of three references by 15 March 1990 to: **Dr. Michael H. Gold, Search Committee Chair, Department of Chemical and Biological Sciences, Oregon Graduate Institute, 19600 N.W. Von Neumann Drive, Beaverton, OR 97006-1999.**

Equal Opportunity Employer

UNIVERSITY OF QUEENSLAND BRISBANE, AUSTRALIA LECTURER/SENIOR LECTURER IN ANATOMY

The successful appointee will be required to contribute to the teaching of topographical and functional anatomy to students enrolled in subjects within the health and biological sciences. Applicants should have demonstrated a research capability in an area of functional anatomy or human biology and will be expected to supervise postgraduate students in these areas.

Reference Number 60589. Closing date: 16 February 1990. Further information is available from the head of department: **telephone: (07) 377 2722.** Salary: Senior lecturer, A\$42,703 to A\$49,529; Lecturer, A\$32,197 to A\$41,841.

Application forms and further details concerning method of application are available from: **Appointments (37283), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF, England.**

Equal Opportunity in Employment is university policy.

The College of Wooster seeks an **INVERTEBRATE BIOLOGIST** for a tenure-track position to begin fall 1990. Teaching responsibilities include a majors course in invertebrate biology and a nonmajors course. The person will be expected to participate in the college's first-year interdisciplinary program, to direct student research, and to maintain an active research program. Ph.D. required. *The College of Wooster wishes to ensure that the search identifies qualified candidates who are women or members of minorities. Applicants belonging to these groups are encouraged to identify themselves if they wish.* Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. M. D. Kern, Chairman, Biology Department, The College of Wooster, Wooster, OH 44691.** Deadline: 16 February 1990. *The College of Wooster is an Equal Opportunity/Affirmative Action Employer.*

12 JANUARY 1990

Neurochemists MS/BS

Pfizer's expanding commitment to neuroscience research has created new career opportunities at the assistant and associate scientist levels. You will be joining a multidisciplinary research team studying pharmacotherapy of mental illness and central nervous system disorders. You should possess a MS or BS degree or the equivalent in a neuroscience related field and 1-3 years of relevant experience.

Openings are available for skilled neurochemists to conduct *in vitro* and *in vivo* biochemical experiments. Experience with assays of neurotransmitter function, i.e., measurement of release, uptake, receptor binding, second messenger signals, and data analysis is required. The ability to work independently and to summarize and communicate results effectively is also expected. A working knowledge of cell culture, gel electrophoresis, western blots or enzymatic assays is desirable.

Pfizer offers a stimulating scientific research environment with the opportunity to interact with scientists from several disciplines. In addition Pfizer has a competitive compensation/benefit package and generous relocation assistance to our southeastern Connecticut shoreline community. Please send a resume, a letter of interest describing your research experience, and names of three references to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



Synergen, Inc., an established biotechnology company in Boulder, Colorado, seeks Ph.D.'s in:

Purification Development

To develop purification methods for large-scale isolation of recombinant proteins, and to develop assays to monitor purification, and evaluate the purity and stability of the final product. Applicant should have a Ph.D. in biochemistry or a related field and have experience in the purification of proteins.

Animal Physiology/ Pharmacology

Advanced programs at Synergen are investigating the roles of cytokines in inflammatory diseases and of growth factors in neurological disorders and wound healing.

The pharmacology department is seeking applicants with training and experience in neurobiology or in animal models of inflammation. The successful candidates will work to develop novel protein pharmaceuticals by evaluating their actions in relevant animal models.

Protein Biochemistry

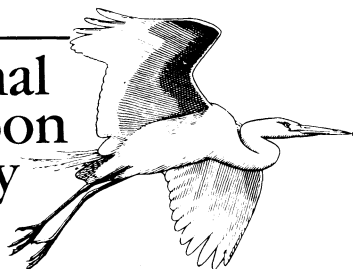
Successful candidates must have experience in purifying and characterizing proteins and developing assays. They will join programs focused on the discovery of proteins important in the physiology of inflammation, wound healing, and neurotrophic factors.

These positions are available for persons who have completed the Ph.D. and 2-5 years of postdoctoral training, as well as for more experienced scientists.

Please send a CV, bibliography and names of references to: **Director of Recruitment, Synergen, Inc., 1885 33rd Street, Boulder, CO 80301.**

SYNERGEN

**National
Audubon
Society**



SENIOR VICE PRESIDENT FOR SCIENCE & SANCTUARIES

The National Audubon Society is one of the nation's largest and most effective environmental and conservation organizations, with more than 500,000 members working at international, national, regional, state, and local levels toward effective wise public policy on the use and protection of our natural resources. The Society has a \$35 million budget and employs 350 dedicated employees who provide leadership in scientific research, wildlife protection, conservation education, and environmental action.

Audubon bases its conservation and environmental policies on scientific analyses that include both original research and policy analysis. The Senior Vice President for Science and Sanctuaries leads this effort and has the responsibility to present Audubon's scientific positions to policy makers as well as to ensure that the Society's positions and practices reflect rigorous scientific assessment. The Division includes 5 departments with 75 full time employees including 14 Ph.D.'s: Field Research, Environmental Policy Analysis, Sanctuaries, Conservation Research Facilities, and American Birds. Scientific investigators on staff engage in individual research and analysis programs and also work on organization-wide campaigns in an integrated fashion with others within the Division as well as elsewhere in the Society.

The position of Senior Vice President for Science & Sanctuaries is based at Audubon's New York City headquarters and reports directly to the President. The overall budget of the Division approaches \$6 million per year. In addition to the basic responsibility to ensure the scientific standards of the organization, the Senior Vice President is responsible for divisional administration, budgeting, and identifying and securing monies to support the program.

Qualified applicants should possess a Ph.D. in a related discipline, with at least 8 years' experience beyond graduate school. That experience should include independent research, research management, grant solicitation and accounting, as well as significant administrative work. Current areas of research may include, but are not limited to, global warming, ecological processes, wetland hydrology, ecosystem function, or population ecology of wildlife, including birds. We seek, in particular, a candidate with breadth of background and experience and a willingness to find innovative scientific solutions to today's environmental and conservation challenges.

Applications should include a C.V., a list of publications, a summary of current and future research plans, and salary history. We offer a competitive compensation and benefit plan that includes relocation. All materials should be sent to:

Robert I. Norman
Director of Human Resources
NATIONAL AUDUBON SOCIETY
950 Third Avenue
New York, N.Y. 10022

*Equal Opportunity/Affirmative Action Employer
Minorities are encouraged to apply.*



DEAN **UNIVERSITY OF MARYLAND** **SCHOOL OF PHARMACY** **BALTIMORE, MARYLAND**

The University of Maryland School of Pharmacy is seeking a distinguished educator/scientist to provide educational, scientific and fiscal leadership for the School. The University of Maryland is an 11 campus, state funded higher education institution. Located in downtown Baltimore, the professional school campus, University of Maryland at Baltimore, is composed of the schools of Pharmacy, Medicine, Dentistry, Nursing, Social Work, Law and the Graduate School. This campus is strongly committed to an interdisciplinary focus.

The Dean is the chief administrator of the School, reporting directly to the President of the University of Maryland at Baltimore. The School of Pharmacy is research-intensive and committed to excellence in professional and graduate education.

Nominations and letters of interest should be sent directly to the Chair of the Search Committee as soon as possible. Applications, including a complete curriculum vitae, will be accepted until February 1, 1990.

Karen Plaisance, Pharm. D.
Chair, Dean Search Committee
University of Maryland School of Pharmacy
20 N. Pine St.
Baltimore, MD 21201

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

Deputy Director

UNIVERSITY OF MINNESOTA
Army High Performance Computing Research Center

The University of Minnesota seeks an individual to direct the management and oversight functions of the Infrastructure Support Program for the Army High Performance Computing Research Center (AHPCRC). This program will include approximately twenty-seven (27) scientists and support personnel hired by the Minnesota Supercomputer Center, Inc. (MSC) as a subcontractor to the University. Eighteen (18) scientists will be located at 9 Army sites in the United States, and the remaining will be based at the MSC Building in Minneapolis. The Deputy Director will report to the Director of the AHPCRC.

A B.S. degree (or higher degree) in some area of the mathematical sciences, physical sciences or engineering is required. Proven managerial experience is essential, and a background in modern high performance computing is desirable.

A qualified candidate may be appointed as an Adjunct Professor or a Tenured Professor in a appropriate department in the Institute of Technology at the University of Minnesota. A tenured appointment requires a Master's Degree (or a high degree) plus a proven and current research record.

Appointment to begin March 1, 1990 or later.

Applications and nominations are due by February 16, 1990.

Nominations and applications should be sent to:

Dr. George R. Sell, Chair
AHPCRC Deputy Director Search Committee
University of Minnesota
Army High Performance Computing Research Center
6-196 EE/CS Building
200 Union Street S.E.
Minneapolis, MN 55455
Telephone: 612/626-1550

*The University of Minnesota is an equal opportunity educator and employer
and specifically invites and encourages applications from women and minorities.*

Center for Biotechnology and Bioengineering

The University of Pittsburgh announces the establishment of three senior faculty positions to lead the interdisciplinary research programs of the Center for Biotechnology and Bioengineering. This institute will be headquartered in a new facility and closely associated with the Schools of Medicine, Engineering, Arts and Sciences, and Business. The primary responsibility of the Assistant Directors will be to recruit for and develop the programmatic thrust for their respective units. They will be part of a collaborative management team for the Center's research, educational, and technology transfer programs.

Assistant Director for Biology

This Division will enhance and expand ongoing University initiatives in immunomodulators, protein structure and function, gene expression, neuroscience, and cancer research.

Assistant Director for Bioinstrumentation

The focus of this Division will be bioanalytical methods, physiological data acquisition and analysis, sensors, clinical diagnostic techniques, and image analysis.

Assistant Director for Biocomputing

The focus of this Division will be computational aspects of molecular modeling, software for genetic and medical informatics, modeling of biological systems, and data base management.

Priority will be given to inquiries, nominations, and applications received by February 23, 1990.

Dr. Jerome S. Schultz, Director

Center for Biotechnology and Bioengineering, 911 William Pitt Union
University of Pittsburgh, Pittsburgh, PA 15260

Affirmative Action/Equal Opportunity Employer



University of Pittsburgh

THE UNIVERSITY OF ARIZONA DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY AND THE ARIZONA CANCER CENTER FACULTY POSITION IMMUNOLOGY/CANCER BIOLOGY

Applications are invited for a tenure track faculty position in the field of Immunology as broadly related to cancer to augment our existing faculty group. Research in the areas of tumor immunology related to the regulation of proliferation and differentiation, lymphokines, growth and regulatory factors and cell-cell recognition are of special interest. However, outstanding scientists in other areas will also be considered. Candidates for this position should have at least two years of pertinent postdoctoral experience. The successful candidate will be expected to develop a nationally recognized independent research program and participate in related departmental teaching. A wide variety of interactions with our faculty are possible in many areas of immunology, biochemistry, molecular & cellular biology, and clinical cancer research (including a recently established bone marrow transplant program). We provide excellent physical facilities, a stimulating research environment, and competitive salary and benefits. The recently completed Arizona Cancer Center facility and the Biotechnology Division as well as new scientific leadership in Microbiology and Immunology add to the many scientific resources available at the University of Arizona. Applicants should provide a curriculum vitae, two copies of recent representative publications, and a detailed description of research goals. The applicant should also arrange for three letters of recommendation to be sent directly to us. The search committee will begin reviewing applications on February 15, 1990 and will continue to accept applications until the position is filled.

The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from female and minority group members are strongly encouraged.

Submit applications to: John Marchalonis, Ph.D., Chairman, Department of Microbiology & Immunology, University of Arizona, College of Medicine, 1501 N. Campbell Avenue, Tucson, AZ 85724

PCR DIAGNOSTICS

Substantial progress has been made at Hoffmann-La Roche over the last year in PCR DNA Probe Research and Development: Roche Biomedical Laboratories is currently commercializing a PCR assay for the detection of HIV; Roche Diagnostic Systems has developed rapid, colorimetric PCR assays for detecting viruses and bacteria in clinical specimens.

We are accelerating the expansion of the DNA Probe Diagnostic Group and we are looking for additional scientists to build upon our strong technical and marketing foundation:

Assay Development

Group Leader and **Senior Scientist** positions are available for developing viral or bacterial screening and diagnostic assays. A strong background in clinical virology or microbiology required; working knowledge of molecular biology, DNA probes and PCR hybridizations is also necessary.

Assay Formats

Senior Scientist positions are available for developing second generation DNA probe formats. A strong background in assay development and molecular biology is desired; experience with designing sample processing or homogeneous hybridization/detection methods is required.

Instrument Chemistries

Group Leader and **Senior Scientist** positions are available to develop systems for automating sample processing and PCR hybridization assays. Will be responsible for interfacing with Roche's, engineering/instrumentation subsidiary. A strong biochemistry background is required; experience designing automated immunoassays or DNA probe assays also required.

For confidential consideration, please send your resume, indicating present salary (those without this information will not be acknowledged), to: **Mrs. Eleanor M. Malone, Staffing and Employee Services, Department JL190, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For A Healthier Tomorrow



ACADEMIC RESEARCH ENHANCEMENT AWARD

The Academic Research Enhancement Awards (AREAs) provide funding for feasibility studies, pilot studies and other small-scale health related research projects. Awards are made in amounts of up to a total of \$75,000 in direct costs (plus applicable indirect costs) for a period of up to three years; however, no more than \$35,000 in direct costs may be awarded for any one year.

Eligibility Requirements

1. Applicant Institutions

All domestic institutions offering baccalaureate or advanced degrees in the sciences related to health are eligible, except those that have received an NIH Biomedical Research Support Grant (BRSG) of \$20,000 or more per year for four or more years during the period from FY 1983 through FY 1989.

2. Applicant Principal Investigators

Must not have active research grant support (including an AREA) from either NIH or the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) at the applicant institution at the time of award of an AREA grant.

May not submit a regular NIH or ADAMHA research grant application for essentially the same project as a pending AREA application.

Are expected to conduct the majority of their research at their own institution, although limited access to special facilities or equipment at another institution is permitted.

May not be awarded more than one AREA grant at a time nor be awarded a second AREA grant to continue the research initiated under the first AREA grant.

Award Criteria

Funding decisions are based on the research project's scientific merit and relevance to NIH programs, and the institution's contribution to the undergraduate preparation of doctoral-level health professionals. Among projects of essentially equivalent scientific merit and program relevance, preference will be given to those submitted by institutions that have granted baccalaureate degrees to 25 or more individuals who, during the period 1979-1989, obtained academic or professional doctoral degrees in the health related sciences.

APPLICATION RECEIPT DATE

June 22, 1990

Anticipated Number of Awards: Approximately 112 grants

For information and application materials, contact:

Office of Grant Inquiries
Division of Research Grants
National Institutes of Health
Westwood Building, Room 449
Bethesda, Maryland 20892
(301) 496-7441

POSITIONS OPEN

SWISS INSTITUTE FOR EXPERIMENTAL CANCER RESEARCH LAUSANNE, SWITZERLAND

Applications are invited for a junior or senior **STAFF MEMBER** position in the field of cell-cell or cell-extracellular matrix interactions. We expect candidates to develop a strong independent and competitive research program and to interact productively with existing research groups. The future group leader will be able to start activity in the beginning of 1991. Applications, including curriculum vitae and bibliography as well as the names and addresses of three referees, should be submitted by 15 March 1990 to: **Dr. Lukas Kühn, Swiss Institute for Experimental Cancer Research, Chemin des Boveresses, CH-1066 Epalinges s/Lausanne, Switzerland.**

REED COLLEGE, 1-YEAR POSITION IN MOLECULAR GENETICS

The Biology Department is seeking a person to fill a 1-year position in molecular genetics. Applicants should have a Ph.D. in an appropriate field, preferably with teaching experience. Teaching duties include two upper-division undergraduate courses (one with a laboratory section), a 4-week segment of the introductory course, and supervision of a small number of senior research students. Supplies and equipment will be available to support the successful applicant's research activities. Applications, including three recent letters of recommendation, should be submitted by 15 February 1990 to: **Dr. S. Arch, Chairman, Biology Department, Reed College, Portland, OR 97202-8199. Reed College is an Equal Opportunity/Affirmative Action Employer.**

The Dallas University of Texas Southwestern Medical Center is seeking a person with 3 years of postdoctoral experience with a Ph.D. in biochemistry or molecular biology. This will be a **JUNIOR FACULTY POSITION** at **INSTRUCTOR** level. Applicant should have experience in cell culture of neuronal cell lines and lymphocytes, DNA and RNA purification, in situ hybridization, and recombinant DNA methods. Will perform studies on the cloning and sequencing of neurotransmitter enzymes. Send curriculum vitae to: **Dr. Joachim Raese, Department of Psychiatry, VAMC, 4500 South Lancaster, Dallas, TX 75216. We are an Equal Opportunity Employer.**

HUMAN GENETICIST

Immediate opening for an M.D. or Ph.D. with interest in molecular, biochemical, population, or cytogenetics. Responsibilities include the development of an independent research program and to provide administrative support for the NIGMS Human Genetic Mutant Cell Repository. Development funds and joint medical school faculty appointment are available. Send curriculum vitae, statement of research interests, and the names of three references to:

**Dr. Gerard J. McGarrity, President
The Coriell Institute for Medical Research
401 Haddon Avenue
Camden, NJ 08103**

Affirmative Action/Equal Opportunity Employer.

MAMMALOGIST

University of Alaska, Fairbanks (UAF), Museum and Department of Biology and Wildlife, seek **CURATOR OF MAMMALS/ASSISTANT PROFESSOR**, 9-month, full-time, tenure-track. Duties: curation, 50%; teaching, 25%; research, 25%. Salary about \$30,000 (9 months). Required: Ph.D. or equivalent degree in mammalogy or closely related field, some experience in curation of a mammal collection, university teaching, research, and the use of systematics in evolutionary, ecological, or paleoecological studies. Preferred: Strong professional experience in each area, broad mammalian interests, and experience with smaller mammals.

Send to arrive by 15 February 1990, curriculum vitae; interest statement regarding collections, teaching, and research; three selected reprints; and names, addresses, and telephone numbers of five references, to: **F. C. Dean, Search Committee, Curator of Mammals, University of Alaska Museum, Yukon Drive, UAF, Fairbanks, Alaska 99775. Telephone: 907-474-7672. FAX: 907-474-6967. The University of Alaska is an Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

HEALTH SCIENCES POLICY. The Institute of Medicine of the National Academy of Sciences (NAS) is seeking a candidate to assist the study director of the congressionally mandated study of the coadministration of certain service/research programs of the National Institutes of Health and the Alcohol, Drug Abuse, and Mental Health Administration. Will prepare committee background materials, analyze and synthesize materials prepared by others, and assist in data collection, policy analysis, and preparation of final report. Ph.D. preferable, but M.S. or equivalent with four or more years of related experience will be considered. Knowledge of neuroscience or behavioral science highly desirable. Must have demonstrated research, technical and/or policy analysis capability. Excellent oral and written communication skills required; demonstrated abilities in management or project planning and budget management, and ability to do literature searches and library research required. Send résumé to: **NAS (RB), IOM 2133-325, 2101 Constitution Avenue, NW, Washington, DC 20418. Equal Opportunity Employer.**

LEPIDOPTERAN BIOLOGY HARVARD UNIVERSITY DEPARTMENT OF ORGANISMIC AND EVOLUTIONARY BIOLOGY

The Sidney A. and John H. Hessel **PROFESSORSHIP OF BIOLOGY**, for research and teaching in lepidopteran biology, with responsibility for curating the lepidopteran collection of the Museum of Comparative Zoology.

Applicants should have demonstrated excellence in research and a commitment to teaching at the graduate and undergraduate levels, as well as a strong interest in systematics and a readiness to assume curatorial responsibilities for a large and important collection of lepidoptera. Curriculum vitae, statement of interest, and names of three recommenders should be sent to the committee no later than 22 January 1990:

**Committee: Hessel Professorship Search
(Attention: E. O. Wilson)**

**Department of Organismic and Evolutionary Biology
26 Oxford Street
Cambridge, MA 02138-2902**

Harvard University is an Affirmative Action/Equal Opportunity Employer.

MEDICINAL CHEMISTRY FACULTY POSITION: DRUG DEVELOPMENT USING MOLECULAR GENETICS. The Department of Medicinal Chemistry, University of Minnesota, invites applications for a tenure-track **ASSISTANT PROFESSOR** position beginning in August 1990. Candidates should have a Ph.D. in medicinal chemistry or a related field, postdoctoral experience, and the desire to develop a strong graduate research program in the design and production of new drug entities using site-directed mutagenesis, recombination, or other techniques of modern biotechnology. Teaching will be at both the undergraduate and graduate levels. Candidates with expertise in applications of molecular biology to drug design are especially encouraged to apply. Applicants should send curriculum vitae and a proposed research program, and arrange to have three letters of recommendation sent to: **Professor Thomas Shier, Department of Medicinal Chemistry, College of Pharmacy, University of Minnesota, 308 Harvard Street, S.E., Minneapolis, MN 55455.** The deadline for receipt of applications is 15 March 1990. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

MOLECULAR BIOLOGIST/GENETICIST ASSISTANT PROFESSOR

The Biology Department, Wells College, invites applications for a tenure-track position to begin September 1990 to teach genetics, molecular biology, microbiology, and immunology. Applicants must have a Ph.D. and postdoctoral experience and a strong commitment to both teaching and research. The successful applicant will be encouraged to develop a research program involving qualified undergraduates. Interested persons should send curriculum vitae, transcripts, a statement of teaching and research goals, and three letters of recommendation by 1 March 1990 to: **Dr. A. Thomas Vawter, Chair, Division of Life Sciences, c/o Office of the Dean, Wells College, Aurora, NY 13026. Wells College is an Equal Opportunity/Affirmative Action Employer.**

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The Diagnostics Division of Abbott Laboratories has helped establish Abbott as an undisputed leader in the development of innovative medical diagnostics products. Our successes have been numerous, including breakthroughs in developing tests for detecting hepatitis B, AIDS, and HTLV I. Currently, we seek the following individuals:

MOLECULAR VIROLOGIST—The selected individual will formulate and direct the development of new diagnostic assays for recently discovered viruses. At least 5 years postdoctoral experience working with either hepatitis or flaviviruses plus knowledge of the pathogenesis of these viruses is required. Molecular biology experience including cloning and sequencing is essential, supervisory experience is desirable. **Job #7540.**

CELL BIOLOGISTS—The qualified individuals must have a degree in the Life Sciences with extensive experience using embryonal stem cells in generating khimaeric animals and/or experience in generating transgenic animals. **Job #93D.**

NUCLEIC ACID CHEMIST—The qualified individual must have at least 4 years postdoctoral experience, and be capable of directing a program to facilitate the development of probe diagnostic assays. Experience with DNA secondary structures, thermodynamics of macromolecules, and parameters affecting structure and conformational changes in DNA in vitro are required. **Job #7620.**

OLIGONUCLEOTIDE PROCESS DEVELOPMENT—We seek B.S., M.S., and Ph.D. scientists with extensive experience in the synthesis, purification and characterization of oligonucleotides to work towards the development of DNA probe assay products. Individuals are sought for technical positions as well as those involving formatting and directing programs. Responsibilities will include the optimization of conditions for producing these reagents at a manufacturable scale. Candidates should be highly goal-oriented and be able to function within a team environment. **Job #7600.**

BIOCHEMIST/IMMUNOCHEMIST—Cardiovascular/Endocrinology—We currently seek individuals to function as project managers and staff scientists for the development of Diagnostic Assays for physiological analytes. The preferred candidates will possess a Ph.D. in Biochemistry or Clinical Chemistry; postdoctoral or industrial experience is preferred. Research background should include protein biochemistry, immunochemistry, ligand binding assays and immunoassay techniques. Familiarity with endocrinology, nutrition, and/or cardiovascular research is desirable. **Job #90Y.**

Our headquarters are established in an attractive suburb just 30 miles north of Chicago. Abbott provides a competitive salary and benefits package including profit sharing. On your resume, please indicate the Job Number of the position in which you're interested, and forward it to: **Keith Allen, Corporate Placement, Abbott Laboratories, 1 Abbott Park Rd., Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer.

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Biology Department Scientific Staff Vacancy

PLANT SCIENTIST

Applications are invited for a staff position in the area of plant cell biology, structural biology, molecular biology or genetics. Applicants should have a Ph.D. or equivalent degree and relevant postdoctoral training. The selected candidate will be expected to develop an independent and creative program on a biologically important topic relevant to plants.

- The Biology Department has strong programs in molecular genetics, structural biology, DNA damage and repair, virology, and plant molecular biology.
- Offer includes excellent start up funding and facilities, a competitive salary, and a comprehensive benefits package.

This is a reopened search. New respondents should submit a curriculum vitae, a list of at least three professional references, and a statement of research interests to: Dr. G. Hind, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., New York 11973. Deadline for applications is February 26, 1990. Equal opportunity employer, M/F.

**BROOKHAVEN
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Howard Hughes Medical Institute INVESTIGATORSHIPS

The University of Pennsylvania School of Medicine is renewing its search to identify outstanding scientists for several senior- and junior-level Howard Hughes Medical Institute (HHMI) investigatorships.

Recruitment efforts are focused in three programmatic areas—molecular genetics, molecular neurosciences and molecular immunology—but applications are also invited from individuals with exceptional credentials and promise in other fields. Laboratories and equipment are "state-of-the-art" and are located in a recently opened biomedical research facility. Each individual approved for an HHMI investigatorship will have a faculty appointment in one of the School of Medicine's academic departments.

The University is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.

Interested applicants should send curricula vitae to:

William N. Kelley, M.D.
Executive Vice President and Dean
University of Pennsylvania
Medical Center
2nd Floor John Morgan Building
Philadelphia, PA 19104-6055



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Genzyme Corporation, a rapidly growing diversified healthcare products company, is committed to the development and commercialization of transgenic expression systems for the manufacture of pharmaceutical proteins as part of our overall strategy. To this end, we have dedicated significant resources toward understanding expression in the mammary gland system and to the practical implementation of this technology in large animals. We are currently seeking talented and enthusiastic individuals for key positions in this exciting program.

MOLECULAR BIOLOGY

This individual will lead the research team involved in the identification and characterization of regulatory elements from mammary genes using transgenic animal expression systems. Requires a Ph.D. and 5+ years' postdoctoral experience in both state-of-the-art molecular biology techniques and eukaryotic expression systems.

EMBRYOLOGY

The successful candidate will lead our embryology research program aimed at the generation of novel technologies for the production and analysis of expression in transgenic animals. Requires a Ph.D. in Embryology and 5+ years' postdoctoral experience with transgenic animals. Additional experience in such areas as embryo culturing and/or embryonic stem cell manipulation is desirable.

A second position is available in this group to participate in the embryology research program and in the generation and analysis of transgenic mice. Requires a BS/MS in Biology/Biochemistry and relevant laboratory experience. Experience working with animals is desirable.

Genzyme offers an excellent compensation and benefits package, including 3 weeks' paid vacation, equity participation, a 401(k) plan with a company match, and medical, dental, life, and vision care insurance. For immediate consideration, please send your resume to: Director, Human Resources, Dept. S112, Genzyme Corporation, One Mountain Road, Framingham, MA 01701.



Genzyme Corporation is an Equal Opportunity Employer



University of Minnesota Earl Bakken Endowed Professorship in Biomedical Engineering

The University of Minnesota Medical School and Institute of Technology invite nominations and applications for the **Earl Bakken Endowed Professorship in Biomedical Engineering**. This newly established professorship in the area of Biomedical Engineering/Bioengineering will be affiliated with a recently established, state-funded and privately endowed Biomedical Engineering Center at the University of Minnesota.

The recipient of this Chair will hold a tenured faculty appointment at the rank of professor in one or more of the engineering departments in the Institute of Technology such as Chemical Engineering and Materials Science, Mechanical Engineering, Electrical Engineering or in one or more Basic Science departments in the Medical School. This individual will develop an interdisciplinary research program in biomedical engineering/bioengineering or biological applications of engineering problems and principals in the Biomedical Engineering Center and ongoing graduate program.

The individual must have superlative academic credentials with a national or international reputation for excellence in research and scholarly publications, evidence of effective leadership in education and training of biomedical engineers/bioengineers at the graduate level or equivalent. It would be desirable, but not a requisite for the Chair holder to have a primary engineering focus with significant document interest in biology, biocompatibility, biomaterials or tissue engineering. The holder of this endowed chair is expected to play a leadership role in the overall growth of the bioengineering effort at the University.

Submit nominations/applications by March 1, 1990 to:

Dr. Theodore R. Oegema, Chair
Earl Bakken Endowed Professorship in
Biomedical Engineering
University of Minnesota
Box 310 UMHC
420 Delaware Street S.E.
Minneapolis, Minnesota 55455
(612) 625-7446

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

POSTDOCTORAL POSITIONS

NATIONAL INSTITUTES OF HEALTH PHOENIX, ARIZONA

Positions are available now and in spring or fall of a 1990 for recent Ph.D.s or M.D.s to participate in studies of the molecular biology and genetics of insulin resistance in a diabetes-prone human population. These molecular studies focus on several **PROTEIN KINASES** and **PROTEIN PHOSPHATASES** that are regulated abnormally by insulin in skeletal muscle of insulin-resistant subjects. Expertise in cDNA library construction and screening, oligonucleotide probe design, polymerase chain reaction, restriction mapping and DNA sequencing is essential.

Curriculum vitae, letter of application, and names, addresses, and telephone numbers of three references should be sent to either:

Dr. Clifton Bogardus
or
Dr. James Sommercorn
National Institutes of Health
4212 North 16th Street
Room 541
Phoenix, Arizona
85016



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New Franklin Institute Awards

The Benjamin Franklin National Memorial of the Franklin Institute proudly announces the inauguration of the Bower Awards for achievement in science and business.

The science award, with a cash prize of \$290,000, will be presented to that scientist whose brilliant discovery has significantly advanced a field of science.

The business award will be presented to that business leader who makes the greatest contribution to the advancement of economic or social interests of any business while adhering to the highest ethical standards.

Awards will be presented annually during a major convocation. Submit nominations before April 17, 1990. For guidelines and official nomination forms please contact:

Dr. Larry E. Tise, Executive Director
Benjamin Franklin National Memorial
The Franklin Institute
Benjamin Franklin Parkway and 20th Street
Philadelphia, PA 19103
(215) 448-1329



The Franklin Institute

POSITIONS OPEN

MARINE PROTOZOOLOGIST/ MICROZOOPLANKTON ECOLOGIST

The University of Maryland (UM) Horn Point Environmental Laboratories seek applications for a microzooplankton ecologist with primary interests in the areas of trophic dynamics and nutrient cycling of protozoan grazers in marine habitats. The position is open at the assistant, associate, or full professor level of the tenure-track ranks. The successful candidate is expected to develop a strong independent research program as well as teach and advise in the UM-CEES graduate program. Rank and salary commensurate with experience.

Please send curriculum vitae, summary of research interest, and names, addresses and phone numbers of four referees by 1 April 1990 to: **Dr. Hugh Ducklow, Chairman, Search Committee, Horn Point Environmental Laboratories, Box 775, Cambridge, MD 21613. Telephone: 301-228-8200.** *UM is an Affirmative Action/Equal Opportunity Employer.*

MICROBIAL ECOLOGY/EVOLUTION

The Department of Ecology, Evolution, and Behavior of the University of Minnesota seeks a microbial ecologist to study the population community, or evolutionary ecology, of microorganisms (bacteria, viruses, fungi, algae, or protozoa). We have no preference for habitat or type of organism (heterotrophic, autotrophic, pathogenic), but research should include studies of organisms in relation to their environment. The person hired for this tenure-track **ASSISTANT PROFESSORSHIP** will be expected to establish and maintain an active, extramurally funded research program, train graduate students, teach an undergraduate class in ecology and evolution, and teach a graduate course in microbial ecology. Ph.D. and training in microbial ecology required. Send curriculum vitae, copies of reprints, and a statement of research and teaching interests and experience, and have three letters of recommendation sent by 15 March 1990 to: **Microbial Ecology Search Committee, Department of Ecology, Evolution, and Behavior, 318 Church Street, S.E., University of Minnesota, Minneapolis, MN 55455.**

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

NEUROBIOLOGIST

The Department of Pharmacological and Physiological Sciences invites applications for a tenure-track position in neurobiology. The applicant's research should complement existing strength in sensory physiology, ion channels, neurotransmitter receptors and second messengers, trophic interactions, neuropeptides, and chemical neuroanatomy. Responsibilities will include participation in teaching medical neuroanatomy. Initial rank and salary negotiable. Please send curriculum vitae, statement of research goals, and names of three references to: **Clifford B. Saper, M.D., Ph.D., Department of Pharmacological and Physiological Sciences, University of Chicago, 947 East 58th Street, Chicago, IL 60637.** *The University of Chicago is an Equal Opportunity Employer.*

NEUROBIOLOGY JUNIOR TO SENIOR LEVEL FACULTY POSITION UNIVERSITY OF WASHINGTON

The Department of Physiology and Biophysics invites applications for a faculty position at the **ASSISTANT TO FULL PROFESSOR** level depending on qualifications and experience. This appointment, along with a similar one in the Department of Pharmacology, will augment a robust interdisciplinary neurobiology program. We are interested in all areas of neuroscience, but preference will be given to scientists studying neurons or related cells at the cellular and/or molecular level. *Women and minorities are encouraged to apply.* The successful candidate will be expected to develop an independent research program, teach at the graduate level, and interact with neurobiology faculty and students in this and other departments.

Submit curriculum vitae, statement of research interests and goals, and names and addresses of three referees before 15 March 1990 to: **Peter Detwiler, Chair of Search Committee, Physiology and Biophysics, SJ-40, University of Washington School of Medicine, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MOLECULAR BIOLOGIST/INFORMATION SPECIALIST. The National Library of Medicine (NLM), National Institutes of Health, Public Health Service, has a full-time permanent opening for a technical information specialist to analyze published gene sequence data from international medical journals as part of its indexing operation. Qualifications at GS-9 (starting at \$24,705): graduate degree in a biomedical science (molecular biology preferred), or B.S. degree plus 2 years of professional experience. Qualifications at GS-11 (starting at \$29,891): graduate degree in molecular biology and 1 year of professional experience, or B.S. degree plus 3 years of professional experience in scientific information. Reading knowledge of at least one foreign language is desirable. *U.S. citizenship required.* For application package, contact: **Ms. Apolito, NLM, Building 38, Room 2N17, 8600 Rockville Pike, Bethesda, MD 20894. Telephone: 301-496-4943.** *NLM is an Equal Opportunity Employer.*

MOLECULAR AND PLANT BIOLOGIST. Tenure-track **ASSISTANT PROFESSOR** position to begin September 1990. Candidates would be expected to teach lecture and laboratories in the areas of molecular biology and plant biology, share in the teaching of introductory courses in biology, participate periodically in the teaching of a one-quarter interdisciplinary course common to all freshmen, demonstrate excellence or promise of excellence in teaching, and demonstrate promise of being able to establish a research program, with preference given to research which involves molecular biology techniques and can involve select undergraduate students. The University of Minnesota, Morris (UMM), is a small distinguished liberal arts college of the University of Minnesota, with 2000 students, located 150 miles west of Minneapolis. Candidates should submit by 1 March 1990 complete résumé, transcripts, and three letters of reference to: **Dr. James Olson, Division of Science/Mathematics, University of Minnesota, Morris, MN 56267.** *UMM is an Equal Opportunity Educator/Employer and specifically invites and encourages applications from women and minorities.*

MOLECULAR NEUROBIOLOGIST DEPARTMENT OF PHARMACOLOGY UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track faculty position at the **ASSISTANT or ASSOCIATE PROFESSOR** level in the Department of Pharmacology. A Ph.D. or M.D. degree and postdoctoral research experience are required. Selection will be based on scientific excellence and the potential to establish an outstanding independent research program using molecular approaches in neurobiology and neuropharmacology. The successful candidate will teach and participate in graduate student training in the Department of Pharmacology and the Interdepartmental Graduate Program in Neurobiology. Applicants should send their curriculum vitae, a statement of research plans, and three letters of recommendation by 15 March 1990 to: **Molecular Neurobiology Search Committee, Department of Pharmacology, SJ-30, University of Washington, Seattle, WA 98195.**

The University of Washington is an Affirmative Action/Equal Opportunity Employer and we are particularly interested in receiving applications from qualified women and minority candidates.

PLANT PHYSIOLOGIST

The Department of Biology of Rollins College invites applications for a **VISITING ASSISTANT PROFESSORSHIP** in plant physiology and plant cellular/molecular biology, to begin fall 1990. Initial appointment is for 2 years with potential for renewal. Candidate will teach undergraduate courses in plant physiology, general biology, and other areas of botany, as well as courses for nonmajors. Ph.D. preferred; A.B.D. considered (for appointment as **INSTRUCTOR**). Also required: demonstrated potential for excellence in teaching and a genuine interest in educating undergraduate students. Department has well-equipped laboratories and modern greenhouse for teaching and research. *Applications from members of ethnic minorities and women especially welcome.* Send statement of interest, curriculum vitae, academic transcripts, and three letters of recommendation by 16 February 1990 to: **Dr. James W. Small, Chair, Department of Biology, Rollins College, Winter Park, FL 32789-4497.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

NEUROBIOLOGY

Applications are invited for a position at the tenured, or tenure-track, **ASSISTANT TO FULL PROFESSOR** level. Available 1 July 1990. Salary will be commensurate with qualifications. Candidates should have a Ph.D. M.D., or equivalent degree, and have demonstrated ability to conduct independent research and attract extramural funding. Preference will be given to applicants experienced in manipulating gene expression in mammalian cells, especially relating to neurotransmitters or receptors and/or cytoskeletal elements. Applicants interested in synaptic plasticity, neuroendocrine regulation, or the cellular basis of behavior are also encouraged to apply. Teaching experience in neuroanatomy is desirable. For fullest consideration, applicants should submit curriculum vitae, a brief statement of research interests, representative reprints, and names of three references by 31 March 1990 to: **Dr. Conwell Anderson, Chairman, Search Committee, Department of Anatomy and Cell Biology, University of Illinois, College of Medicine at Chicago, P.O. Box 6998 (M/C 512), Chicago, IL 60680.** *The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

PALEOECOLOGY OF TROPICAL AMERICA SMITHSONIAN TROPICAL RESEARCH INSTITUTE

The Smithsonian Tropical Research Institute is planning a major expansion of its terrestrial and marine research program in the paleoecology of tropical America. The institute is a bureau of the Smithsonian Institution and has headquarters in the Republic of Panama. The paleoecology program is documenting the environmental and ecological history of the region over the last 5 million years. We anticipate two new permanent staff positions to begin in October 1990. We invite applicants at any level in the following disciplines: vertebrate paleontology, paleobotany, invertebrate paleontology, micropaleontology, paleoceanography, and paleoclimatology. Annual salary from \$30,000 to \$59,000 plus benefits and allowances. Level will depend on qualifications. Substantial set-up funds and research support. Screening will begin 15 March 1990 and continue until positions are filled. Applications should include statement of research interests, curriculum vitae, reprints, and names, addresses, and telephone numbers of five references. Send to:

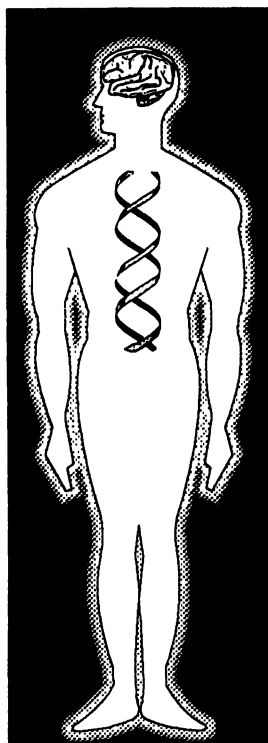
Paleoecology Search Committee Smithsonian Tropical Research Institute APO Miami 34002-0011

The Smithsonian Institution is an Equal Opportunity/Affirmative Action Employer, and appointment can be made without regard to nationality.

PARASITE BIOCHEMIST. Applications are invited for a tenure-track position as **ASSISTANT PROFESSOR** of biology with research experience and expertise in parasite cell biology. Preference will be given to individuals who have research experience and expertise in enzymology and biochemistry. The candidate must have postdoctoral experience (2 years minimum). The position will be within the Biology Department, as part of the OBOR Academic Challenge Program in Molecular Parasitology. Candidates will be expected to maintain an active research program in parasite cell biology. The candidates will be expected to develop graduate and undergraduate courses in areas of expertise and teach introductory biology. Applicants should send curriculum vitae, current reprints, research interest, and arrange to have three letters of recommendation sent before 25 February 1990 to: **Dr. Donald G. Lindmark, Department of Biology, Cleveland State University, East 24th and Euclid Avenue, Cleveland, OH 44115.** *Equal Opportunity Employer, M/F/H.*

PROTEIN BIOCHEMIST

Protein biochemist with five or more years of experience in structure, assembly, and gene expression of retroviruses. Must have demonstrated ability to compete for research grants as a principal investigator. Salary is commensurate with qualifications and experience. Send curriculum vitae with names and addresses of three professional references by 1 February 1990 to: **Dr. Gary Baskin, Delta Regional Primate Research Center, Tulane University (TU), Three Rivers Road, Covington, LA 70433.** *TU is an Affirmative Action/Equal Opportunity Employer.*



POSTDOCTORAL SCIENTIST

MOLECULAR NEUROBIOLOGY NEUROGENERATIVE DISORDERS

Bristol-Myers Squibb, a leader in the discovery of CNS therapeutic agents, is expanding its commitment to research in the molecular neurobiology of neurodegenerative disorders. An immediate opportunity is available for a Postdoctoral level Scientist who has either recently completed a doctoral dissertation or 1-2 years postdoctoral training.

The ideal candidate should possess experience and a strong desire to conduct basic molecular neurobiology research. Familiarity with frog oocyte expression systems; gene cloning, expression, and transfection techniques; as well as the ability to integrate this research into the CNS drug discovery process are essential. Experience in transgenic/embryonic stem cell biology is a plus. In addition, the applicant should possess strong interpersonal skills and should be able to interact and collaborate with scientists from different therapeutic areas.

BRISTOL-MYERS SQUIBB offers competitive salaries, excellent benefits and career growth opportunities. Qualified candidates should send their curriculum vitae, with salary requirements, in confidence to: **BRISTOL-MYERS SQUIBB COMPANY, Pharmaceutical Research & Development Division, Attn: SS-1, P.O. Box 5101, 5 Research Parkway, Wallingford, CT 06492-7661.**



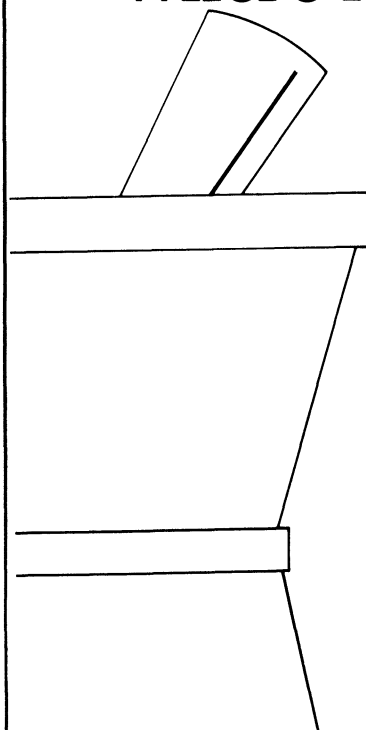
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We recognize that our success is based upon the vital contribution made by every member of our research team, including our **Clinical Research Associates**. From writing protocols to training investigators, the work you'll do here as a Janssen CRA is critical.

And you'll be rewarded accordingly.

Working for a member of the Johnson & Johnson Family of Companies, you'll enjoy a competitive salary and a comprehensive benefits package including our on-site total health facility, the Live For Life Wellness Center. And with the frequency with which new discoveries are made here, there's ample opportunity for career advancement.

Biostatisticians, Medical Writers, and professionals in **Regulatory Affairs** and **Professional Services** will find rewarding career opportunities here as well. If you're excited at the prospect of working where new discoveries are continually taking place, we invite you to send your resume and salary history to: Janssen Research Foundation, Employment Office, Box S190, 40 Kingsbridge Road, Piscataway, New Jersey 08854. An Equal Opportunity/Affirmative Action Employer M/F/H/V.

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Post-doctoral Scientist

Monsanto Agricultural Company, a recognized world leader in innovative agricultural research, has an immediate opening in our Biorational Design Section for a highly motivated, creative professional with strong problem solving skills and the desire to work in a multidisciplinary team environment at the leading edge of herbicide discovery.

ENZYMOLOGIST/BIOCHEMIST: This successful candidate will play a key role in our research team by providing new enzyme mechanism and substrate binding information to dramatically impact successful inhibitor design strategies. A Ph.D. in mechanistic enzymology, bioorganic chemistry, or physical biochemistry is required with experience in protein purification and enzyme kinetics. A desire to learn and apply state-of-the-art NMR methods to characterize small molecule-enzyme interactions is desirable.

This position offers an opportunity to learn molecular level details of plant biochemistry as well as growth and development through a variety of multidisciplinary interactions. We offer a highly competitive salary and benefits package. For immediate and confidential consideration, please send your resume to: Mr. Valentino Martinez, Manager, Office of Professional Staffing and University Relations, Monsanto Agricultural Company, Dept. CE112, 800 North Lindbergh Drive, Mail Zone C2NB, St. Louis, MO 63167. An equal opportunity employer, M/F/H/V.

Monsanto

IMMUNOLOGY PROJECT LEADER — R&D

Because of continued growth, Kallestad Diagnostics Inc. is seeking an individual to fill a research and development position in its Antibody Development program. The candidates we seek should hold an M.S. degree or equivalent in clinical chemistry, biochemistry or immunology with experience in the characterization of antibody products. Experience with evaluation of antibodies for application in competitive and paired sequential immunoassays is required.

We offer an excellent salary and benefits package including employer paid dependent health insurance, 401K, pension and a tremendous opportunity to grow in our team environment. For confidential consideration, send resume to: **Bill Murray, KALLESTAD DIAGNOSTICS INC., 1000 Lake Hazeltine Drive, Chaska, MN 55318.**

Equal Opportunity/
Affirmative Action Employer M/F

Kallestad™

DIAGNOSTICS, INC.

Visiting Research Scientist

Molecular Biology/Gene Expression

A PhD level Visiting Research Scientist position is available within the Gene Expression Group of Du Pont's Central Research and Development Department. This one- to two-year temporary position requires proficiency in recombinant DNA techniques and developmental biology. The successful candidate will join a group interested in the mechanisms of selective gene expression with special emphasis on transcriptional control. Experience in molecular cloning, protein purification, DNA-protein interactions, transgenic mouse technology, gene transfer technology and/or the biochemistry of transcription and eukaryotic *in vitro* transcription systems would be desirable.

At the world-renowned Du Pont Company you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Du Pont provides competitive compensation and relocation benefits. Our mid-Atlantic location offers a wide range of academic, cultural, and recreational activities. Interested candidates should send their resumes and references to Dr. Pamela Benfield, c/o Employee Relations Department, Room X-51271, Wilmington, DE 19898.



An Equal Opportunity Employer M/F/H/V
U.S. Citizenship or Permanent Visa
Required and meet other appropriate
IRCA requirements

McDonnell-Pew Center for Cognitive Neuroscience at MIT

POSTDOCTORAL FELLOWSHIPS IN COGNITIVE NEUROSCIENCE

Fellowships are available for postdoctoral study at the newly founded Center for Cognitive Neuroscience in the Department of Brain and Cognitive Sciences at the Massachusetts Institute of Technology. This Center is composed of faculty at MIT from the disciplines of Neuroscience, Computational Neuroscience, and Cognitive Science and is dedicated to multidisciplinary approaches to the study of higher brain function with special emphasis on visual and motor systems. Interested postdoctoral candidates should identify MIT faculty members with whom they wish to work and submit a two-page project proposal, CV, and three letters of reference by March 30, 1990, to: **Dr. Richard A. Anderson, Department of Brain and Cognitive Sciences, MIT, Bldg. E25-236, 77 Massachusetts Avenue, Cambridge, MA 02139, USA.** Proposals for interdisciplinary projects are especially welcome. Awards will be announced, and fellowships can begin, on April 15, 1990. Candidates may obtain further information and Department brochures by writing to the above address.

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

Massachusetts Institute of Technology

**UNIVERSITY OF ALABAMA
AT BIRMINGHAM.**

**Department of Psychiatry and
Behavioral Neurobiology**

Applications invited for five faculty positions:

1) Pharmacologist (Ph.D.) with expertise in GCMS, phosphoinositide metabolism, cAMP, Ca flux, protein phosphorylation and mechanisms of action of CNS drugs. Assistant/Associate Professor level.

2) Pharmacologist (Ph.D.) with expertise in proteolysis, in vivo phosphorylation of microtubule associated proteins and cAMP production in brain. Assistant Professor level.

3) Biophysicist (Ph.D.) with expertise in magnetic resonance imaging and spectroscopy (MRI/MRS) to develop CNS imaging program. Assistant/Associate Professor level.

4) Polysomnographer/Psychiatrist (M.D., A.C.P.) to head expanding clinical and research program in sleep/wake disorders. Assistant/Associate/Professor level.

5) Polysomnographer/Psychiatrist (M.D., A.C.P.) or Clinical Psychologist (Ph.D., A.C.P.) to aid in development of expanding clinical and research program. Assistant Professor level.

All positions in tenure-earning track; salaries commensurate with experience and qualifications.

Letters of application/curriculum vitae to David L. Garver, M.D., Chairman, Department of Psychiatry & Behavioral Neurobiology, University of Alabama at Birmingham - UAB Station, Birmingham, AL 35294 - (205) 934-4041. AA/EO Employer.

STUDY DIRECTOR

MAMMALIAN CELL MUTAGENESIS

MICROBIOLOGICAL ASSOCIATES' genetic toxicology division is seeking a study director for In Vitro mammalian cell mutagenesis assays. The study director supervises a staff consisting of two laboratory supervisors and four biologists. The ideal candidate should have an advanced degree in cell or molecular biology and "hands-on experience" with the mouse lymphoma TK + /TK - assay and/or with the CHO HGPRT assay. Industrial experience is desirable but not essential.

Our state-of-the-art facility is located in the northern suburbs of Washington, D.C. We offer a comprehensive salary and benefits package that includes relocation. Join us as we continue to build on our 40-year commitment to high quality science.

 **MICROBIOLOGICAL
ASSOCIATES INC.**

Life Sciences Center
9900 Blackwell Road
Rockville, MD 20850

EOE/m/f/h/v

DEPARTMENT OF THE ARMY SENIOR EXECUTIVE SERVICE VACANCY DIRECTOR, MATERIALS SCIENCE DIVISION

U.S. Army Laboratory Command, U.S. Army Research Office
Research Triangle Park, North Carolina

Applications are being accepted for the position of Director, Materials Science Division. This is a Civil Service position in the Senior Executive Service (SES) with a salary range of \$71,200 - \$83,600 per annum.

The incumbent manages a budget of 8-12 million dollars a year and supervises 5-8 professionals in the development of a materials science research program taking into account current technology deficiencies. Plans and organizes the extramural basic research program in materials science. Develops short and long-range objectives. Maintains close liaison with Army laboratories and test and operational agencies for transfer of information between in-house scientists and the extramural scientific community. Continually evaluates program for attainment of objectives. Represents the Army Research Office in meetings with university faculty members, administrators and industrial researchers to describe areas of interest and policies. Serves as the technical authority for the total Army research mission in materials science.

Applicants must clearly show that they have had experience of the scope and quality sufficient to carry out the assignments of the position. Best qualified candidates must have demonstrated possession of the following managerial and technical qualifications: **MANAGERIAL** — (1) Ability to see that key national and agency-wide goals, priorities, values and other issues are taken into account in carrying out the responsibilities of the immediate work unit; (2) Ability to establish and maintain relationships with key individuals and groups outside the immediate work unit and to serve as spokesperson for the unit or organization; (3) Ability to establish goals and the structure and processes necessary to carry them out; (4) Knowledge of procedures and activities related to obtaining and allocating the resources necessary to support program or policy implementation; (5) Ability to see that people are appropriately employed and dealt with fairly and equitably; and (6) Ability to see that plans are being implemented and/or adjusted as necessary and that appropriate results are being achieved. **TECHNICAL** — (1) Knowledge of state-of-the-art developments in materials science research; (2) Ability to evaluate the quality of research programs in materials science. An advanced degree in materials science/engineering is desired.

Applicants must submit a completed SF 171, Application for Federal Employment (available at Federal Job Information Centers and Federal Personnel Offices) and a supplemental statement on bond paper which addresses each qualification listed above to U.S. Army Materiel Command, ATTN: AMCPE-CS, 5001 Eisenhower Ave., Alexandria, VA 22333-0001. Supplemental forms will be provided to all applicants by this office. Additional information may be obtained by calling (202) 274-9415/6.

Applications must be postmarked by February 5, 1990.

THE DEPARTMENT OF THE ARMY IS AN EQUAL OPPORTUNITY EMPLOYER

Biologist

The Animal Industry Discovery and Biotechnology Department at American Cyanamid Company's Agricultural Research Division has an immediate opening for a Research Assistant in the Molecular Genetics Screen Design Section. The successful candidate will join a laboratory which is using yeast genetic systems to express receptor proteins (soluble and membrane receptors) and to study the functions of these proteins.

Candidates should have a BS or MS degree in Biological Sciences with two or more years laboratory experience in recombinant DNA techniques and molecular genetics of yeast (e.g. *Saccharomyces cerevisiae*). In addition, a background in yeast expression systems and receptor biochemistry is highly desirable.

American Cyanamid offers a competitive compensation and benefits package which includes 401(k) Savings Plan, flex-time work schedules and a convenient location one hour from New York City and Philadelphia. For prompt and confidential consideration, please send your resume and reference contacts to Employment Office, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. An Equal Opportunity Employer.

 **CYANAMID**

THE COMMITMENT GROWS EVERY DAY

PLANT PHYSIOLOGY

- Newly created research position to develop an understanding of the growth mechanisms of trees and other plants.
- Position is entry level, requiring a Ph.D. in Plant Physiology or another closely related discipline and 0-2 years of relevant research experience.

UNION CAMP CORPORATION is a Fortune 200 manufacturer of high quality paper and chemical products. It is noted for its financial stability in addition to its commitments to excellence and to its employees.

For consideration, please send a resume and salary history to:

Mrs. E.G. Denoeux
Technical Recruiting Manager
UNION CAMP CORPORATION
P.O. Box 3301
Princeton, NJ
08543-3301

Equal Opportunity Employer

Union Camp
 CORPORATION

Research Scientist Drug Discovery

Corvas, Inc., a biopharmaceutical company located in the biomedical research center of La Jolla, is expanding to address exciting product opportunities in the thrombosis field. We are seeking outstanding scientists to join our drug discovery and development effort.

You will lead a project to develop new platelet aggregation inhibitor agents. Experience in platelet biochemistry and ligand/receptor binding assays is desired. A Ph.D. in biochemistry or immunochemistry and 2+ years of experience are required.

Corvas offers attractive salaries and benefits, an excellent opportunity for equity participation and a highly interactive scientific environment. For consideration, please send letter of interest and CV to: **Human Resources Director, Corvas, Inc., 11077 North Torrey Pines Road, La Jolla, CA 92037.**

Corvas, Inc.

POSITIONS OPEN

PHYSIOLOGIST. The Program in Ecology, Evolution, and Behavior of the Biology Department at Princeton University invites applications for a position in animal physiology, rank open. The current faculty in the program are Andy Dobson, Jim Gould, Peter Grant, Henry Horn, Steve Hubbell, Marty Kreitman, Naomi Pierce, Dan Rubenstein, Don Stratton, and Ted Sullivan. The closing date for applications is 16 March 1990. Applicants should send curriculum vitae and brief statement of research interests and plans, and arrange for three letters of reference to be sent to: **Dr. Henry Horn, Search Committee, Program in Ecology, Evolution, and Behavior, Guyot Hall, Princeton University, Princeton, NJ 08544-1003.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

PLANT ECOLOGIST. Marshall University invites applications for a tenure-track position beginning August 1990. The successful candidate will teach courses in plant ecology, plant anatomy, general ecology, and general biology, and develop a research program in the area of plant ecology. Individuals with a strong commitment to teaching/research preferred. Ph.D. required; salary commensurate with experience. Closing date for applications is 15 February 1990. Send resume and names of three references to: **Chairman, Search Committee, Department of Biological Sciences, Marshall University, Huntington, WV 25755.** *Marshall University is an Affirmative Action/Equal Opportunity Employer.*

PLANT PHYSIOLOGIST

ASSISTANT PROFESSOR. The Department of Biological Sciences at Butler University wishes to fill a tenure-track position to begin fall 1990. Butler University is a selective, private university located on a beautiful 300-acre campus in the residential heart of Indianapolis. The position stresses enthusiasm for teaching and directing undergraduate research. Teaching responsibilities include plant physiology and introductory biology. An individual research laboratory will be provided and start-up costs negotiated. Candidates must have a Ph.D. degree. Applicants should submit curriculum vitae, undergraduate and graduate transcripts, a statement of teaching and research interests, and arrange for three letters of reference to be sent by 9 February 1990 to: **James L. Shellhaas, Department of Biological Sciences, Butler University, Indianapolis, IN 46208.** Selection for interviews will begin on 9 February 1990 and will continue until a suitable candidate is found. *Butler University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY. Available immediately to study control of eukaryotic gene expression in viral systems by identification of cis acting elements, purification transcription factor(s), and cloning of their genes. Competitive salary. Send curriculum vitae and three recommendation letters to: **Dr. G. Kumar, Associate Professor, Department of Molecular Biology and Genetics, School of Medicine, Wayne State University, Detroit, MI 48201.** Telephone: 313-577-0019. *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

NEUROBIOLOGY AND MEMORY

POSTDOCTORAL POSITIONS available immediately to study neuroendocrine regulation of memory formation. Projects include: interactions of circulating epinephrine and glucose levels with brain functions, assessed with behavioral, neurophysiological and neurochemical measures; age-related memory deficits in rodents and humans; pharmacology of long-term potentiation. Please submit curriculum vitae and references to: **Dr. Paul E. Gold, Department of Psychology, Gilmer Hall, University of Virginia (UVA), Charlottesville, VA 22903.** *UVA is an Equal Opportunity/Affirmative Action Employer.*

A **POSTDOCTORAL ASSOCIATE** position is available to study the regulation of intermediate filament genes during mouse development. Opportunity of learning transgenic mouse methods in an established program. Recent doctorates who expect to pursue independent research careers are encouraged. Please submit curriculum vitae and reference information to: **Robert Oshima, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla CA 92037.** FAX: 619-453-6217. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION. Molecular mechanisms of membrane fusion: liposomes, viruses, intra- and intercellular. Experience in physical biochemistry and cell biology preferred. Send curriculum vitae, relevant reprints, and three letters of recommendation to: **Dr. Joe Bentz, Department of Bioscience, Drexel University, 32nd and Chestnut Streets, Philadelphia, PA 19104.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS IN FLUORESCENCE IMAGING

The Section on Neuronal Secretory Systems has postdoctoral opportunities in the areas of neuronal secretion and its regulation. The section is involved in exciting studies on fluorescence video microscopic imaging to measure intracellular ion transients in neuronal and glial cells, and studies on the mechanism of secretion and its modulation in isolated nerve terminal systems. The position is offered depending on the experience of the applicants. Candidates should have interest in either quantitative fluorescence microscopy and real-time image processing or cell biology of neuronal secretion. Send curriculum vitae and names of three references to:

James T. Russell
Laboratory of Developmental Neurobiology
NICHD, NIH, Building 36, Room B-316
9000 Rockville Pike
Bethesda, MD 20892

U.S. citizenship is not required.
NICHD is an Equal Opportunity Employer.

POSTDOCTORAL POSITION MOLECULAR PHARMACOLOGY RESEARCH

McLean Hospital, affiliated with Harvard Medical School, has a funded postdoctoral position available immediately at its Mailman Research Center to study the effects of psychotropic drugs, including drugs of abuse, on gene expression in the brain. The applicant should have a background in neuroanatomy or molecular biology, and experience in in situ hybridization is required.

Send curriculum vitae and names of three references by 1 March 1990 to:

Bruce M. Cohen, M.D., Ph.D.
McLean Hospital
Mailman Research Center
115 Mill Street
Belmont, MA 02178

McLean Hospital and Harvard Medical School are Equal Opportunity Employers.

POSTDOCTORAL RESEARCH ASSOCIATE (USDA supported) position is available to study immune responses of swine to recombinant viruses as part of a collaborative program between the Colleges of Veterinary Medicine and Medicine. Individuals with experience in cell-mediated immunity are encouraged to apply. A Ph.D., D.V.M., or equivalent degree is required; a working knowledge of molecular virology is desirable. Send curriculum vitae and names of three references to: **Dr. Paul Gibbs, Department of Infectious Diseases, College of Veterinary Medicine, Building 471, Mowry Road, IFAS 633, University of Florida, Gainesville, FL 32611-0633.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

CAREER CHANGE OPPORTUNITY

The School of Oceanography of the University of Washington is proud to announce, through the generosity of the Office of Naval Research's Ocean Science Educator Program, the immediate availability of a 3-year **POSTDOCTORAL PROGRAM** for a **STATISTICIAN** interested in applying his or her skills to oceanography on a long-term basis. Specialists in other non-oceanographic disciplines (e.g., physics or applied mathematics) may also be considered. Funding includes both salary (\$32,000 per year) and research support (\$25,000 per year). Topics of particular interest include, but are not limited to, intelligent use of sparse and gappy data sets, objective mapping, non-stationary Kriging, multivariate spatial statistics, and Lagrangian statistics. Please forward a statement of interest, curriculum vitae, selected reprints, and a list of three or more references to: **Peter A. Jumars, School of Oceanography, WB-10, University of Washington, Seattle, WA 98195.** All applications received before 1 April 1990 will be considered, but the position may remain open longer for particularly promising candidates.

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available April 1990 to study autoimmune aspects of Type I diabetes in man. This project focuses on the role of T cells in the etiology of the disease and integrates cellular immunology and molecular biology. A background in immunology is desired. Training in molecular biology will be provided if necessary. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Karen S. Zier, Ph.D., Department of Medicine, Box 1055, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

PAF SIGNAL TRANSDUCTION

POSTDOCTORAL POSITION to investigate transmembrane signaling mechanisms for platelet activating factor receptor coupled PI turnover utilizing molecular biological approaches. Ph.D., experience in receptors and molecular biology preferred. Send curriculum vitae and names of three references to: **Dr. Shivendra D. Shukla, Department of Pharmacology, University of Missouri-Columbia (UMC), School of Medicine, Columbia, MO 65212. Telephone: 314-882-2740. Equal Employment Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE: MOLECULAR GENETICS OF ATHEROSCLEROSIS AND RNA EDITING. Position open to study the molecular genetics of apolipoprotein, lipoprotein lipase, and hepatic lipase expression and RNA editing in mammals. Techniques include cloning, transfection/expression, mutagenesis, RNA/DNA binding, RNA editing, and transgenic animals. Prior experience in molecular biology desirable; Ph.D. degree in biochemistry, molecular biology, or biology required. Send résumé and three letters of reference to: **Dr. Lawrence Chan, Department of Cell Biology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. Telephone: 713-798-4478. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS IN INSECT BIOTECHNOLOGY

The newly formed Canadian network of centers of excellence entitled Biotechnology for Insect Pest Management invites applications for positions as postdoctoral fellow or research associate. The network includes participants in ten Canadian universities and three government laboratories. There are strong linkages with industry. The objective is basic research directed toward development of new, environmentally acceptable means of insect pest control. Research areas include: molecular engineering of baculoviruses, insect neuropeptides, molecular genetics of pesticide resistance, insect cell and molecular biology, biosynthesis and action of juvenile hormone, and analogs. The program has major funding from the Canadian government for 4 years. Positions may be available at any of the participating centers. Applicants should have background in molecular biology and genetics and preferably some background or experience in insect physiology, biochemistry, or toxicology. The salary scale for postdoctoral fellows will follow the guidelines set by the Natural Sciences and Engineering Research Council of Canada. In accordance with Canadian immigration requirements, priority for research associate positions will be given to Canadian citizens or permanent residents.

Applicants should submit curriculum vitae, names of three referees, and a brief statement of research interests to: **Dr. G. R. Wyatt, Department of Biology, Queen's University, Kingston, Ontario, Canada, K7L 3N6.**

RESEARCH ASSOCIATE. Conduct research in the kinetics of electron transfer reactions of transition metal complexes in homogenous solutions and at the electrode interfaces; review and analyze laboratory data; prepare manuscripts for publication; present research findings at scientific meetings. Ph.D. in chemistry required, together with 2 years of experience in the job offered or 2 years of experience as a postdoctoral fellow in chemistry. Experience must have included kinetics using spectrophotometers, stopped-flow instruments, and lasers; kinetics at electrode interfaces; numerical analysis; and interpretation of kinetics data. Forty hours per week, Monday to Friday, 8:30 a.m. to 5:00 p.m.; \$26,049 per year. Send résumé and Social Security Number to: **Illinois Department of Employment Security, 401 South State Street, 3 South, Chicago, IL 60605, Attention: Connie M. Evans, Reference #V-IL-9802-E. An employer-paid ad.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study molecular mechanisms of axonal degeneration in toxic states. Ph.D. in neurochemistry, pharmacology, enzymology in situ hybridization, axonal transport polycrylamide gel electrophoresis desirable. Salary negotiable. Apply with two to three references by 10 February 1990 to: **Dr. P. S. Spencer, Center for Research on Occupational and Environmental Toxicology, Oregon Health Sciences University (OHSU), 3181 S.W. Sam Houston Park Road (L474), Portland, OR 97201-3098. OHSU is an Equal Opportunity/Affirmative Action Employer.**

RADIOECOLOGIST

The University of Georgia's Savannah River Ecology Laboratory invites applications for a senior-level **FACULTY POSITION** in radioecology. The successful candidate will be expected to assume a lead role in an existing program of research and training. Applicants should have a history of research excellence and success in obtaining extramural funding. Previous experience with aquatic ecosystems, computer modeling, and graduate education are also desirable. Academic rank, departmental affiliation, and salary are negotiable. Applicants should submit curriculum vitae, statement of research interests, copies of recent publications, and letters of recommendation to: **Dr. J. E. Pinder III, Chairman, Radioecologist Search Committee, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802. Applicants must be U.S. citizens. Application materials and letters of recommendation should be received by 5 February 1990.**

RESEARCH ASSOCIATE

Brigham and Women's Hospital has an opening for a research associate to study electrophysiology of smooth muscle. Applicant should have experience with in vivo experimentation, chronic animal preparations, and basic physiological techniques. Experience with patch clamp technique welcome.

Candidates should have a Ph.D. in a related field and capacity for interdisciplinary research and growth. Please send résumé, letter of interest, and names of references to: **D. S. Sugarbaker, M.D., Department of Surgery, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.**

RESEARCH ASSOCIATE

Projects to study the role of DNA helicases in mammalian DNA replication. Approaches involve use of molecular biology methods to construct DNA molecules to model strand separation and DNA replication reactions in vitro. Monoclonal antibody-based methods are being used for purification of DNA replication proteins. Contact: **Dr. Robert Bambara, Department of Biochemistry, Box 607, University of Rochester, Rochester, NY 14642.**

RESEARCH ASSOCIATE for college in northeastern Ohio. To participate in a number of research projects related to family practice, including (but not limited to) the following: an epidemiologic study of hepatitis B vaccine among a retarded population, and congestive heart failure treatment, including assessing the impact of vasodilators. Must have M.D. in medicine and must have finished at least 2 years of residency in family practice. Forty hours per week, 8:30 a.m. to 5:30 p.m., Monday to Friday; \$27,000 per year. Send résumé (no calls) to: **G. Maugans, JO# 0019488, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

The Massachusetts Institute of Technology (MIT) Biology Department is seeking a **RESEARCH SCIENTIST** to work on projects requiring extensive experience in: (i) recombinant DNA techniques including isolation of DNA, cloning of DNAs into plasmid and viral vectors, restriction mapping, deletion mapping, DNA sequencing, and DNA blot procedures; (ii) oligonucleotide synthesis; (iii) computer analysis of DNA sequences; (iv) protein purification and analysis; and (v) raising antibodies. Candidate must have a Ph.D. degree in biochemistry, at least 2 years of postdoctoral experience in molecular biology, published papers in major refereed journals, and experience in teaching and supervising students in the laboratory. Salary range: \$30,000 to \$35,000. Please submit résumé and names of at least three references to: **Mr. Kenneth Hewitt, Room E19-230, Personnel Office, MIT, Cambridge, MA 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

Laboratory of Nutritional and Molecular Regulation

Cancer Prevention Research Program
Division of Cancer Prevention
and Control
National Cancer Institute
Public Health Service

POSTDOCTORAL FELLOW & SENIOR STAFF FELLOW POSITIONS

Positions are available for doctoral-level individuals to participate in a research program on nutrition and cancer prevention in the recently established **Laboratory of Nutritional and Molecular Regulation** at the Frederick Cancer Research Facility.

This Laboratory conducts research on cellular and molecular regulation as they pertain to nutrition and cancer prevention; emphasizes basic mechanisms by which nutrients directly or indirectly augment or inhibit tumorigenesis; uses a multidisciplinary approach (biochemistry, cell biology, and molecular biology).

Staff Fellow, Senior Staff Fellow and Intramural Research Training Award (IRTA) positions are available for U.S. Citizens, Fogarty Visiting Fellow & Associate positions for foreign nationals. Salary ranges from \$20,000 - \$50,000 depending on training and experience.

M.D., D.V.M. or Ph.D. applicants with training and/or experience in endocrinology and metabolism, nutritional science, biochemistry, cell biology, and molecular biology will be considered.

Qualified and interested candidates should send curriculum vitae and names and addresses of three (3) references to:

James M. Phang, M.D.
Chief, Laboratory of Nutritional and Molecular Regulation, NCI
Executive Plaza North, Room 202
National Institutes of Health
Bethesda, MD 20894

Telephone: (301) 496-3097



NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

POSTDOCTORAL POSITION DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS

A position is available to study the kinetic mechanism of N-myristoyltransferase, an enzyme which mediates the covalent attachment of myristic acid to a number of viral and cellular proteins. Selective transfer of analogs of myristic acid by this enzyme in vivo is being used as an antiviral strategy. Biochemical and molecular biological techniques will be used to examine the enzyme's structure/activity relationships.

Applicants should send curriculum vitae, statement of research interests, and names of three references to: Dr. Carl Frieden, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, 660 South Euclid Avenue, Box 8321, St. Louis, MO 63110.

An Equal Opportunity/Affirmative Action Employer.

VISION SCIENTIST. Tenured or tenure-track position available to join strong research-oriented group of vision scientists. Research specialization in the area of experimental optics, or human psychophysics, or human corneal physiology is desirable. Applicants must have an O.D. (or equivalent) and a Ph.D. in physiological optics. Rank and salary dependent on qualifications. Send letter of application, curriculum vitae, copies of selected publications, and three letters of reference to: Dean Jerry L. Christensen, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121. *Women and minorities are encouraged to apply.* Deadline: 28 February 1990.

WILDLIFE TOXICOLOGIST

Exxon Biomedical Sciences, Inc., has an immediate opening for a qualified individual specializing in wildlife toxicology. The successful candidate will have an M.S. or Ph.D. and 1 to 3 years of experience in wildlife/vertebrate ecology or wildlife management, with a focus on effects of environmental pollutants on wild bird and mammalian populations. In addition, the applicant should have a knowledge/familiarity of analytical chemistry techniques and toxicity of industrial chemicals. Please forward résumé to:

Christine Ramos, Human Resources
Exxon Biomedical Sciences, Inc.
Mettlers Road, CN 2350
East Millstone, NJ 08875-2350
Equal Opportunity Employer, M/F/H/V.

FELLOWSHIPS

RESEARCH FELLOW for spectroscopic studies on protein conformational changes, proteins, membranes, and protein-membrane complexes. Ph.D. in biophysics/physics or equivalent degree required, including research experience in vibrational and fluorescence spectroscopy, preparation and properties of liposomes, and protein isolation and purification. Salary: \$20,600 per year; 40 hours per week. Contact: Job Service, 110 West Main Street, Carrboro, NC 27510 or the Job Service Office nearest you. Refer to: Job Order Number NC 3190685.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITION. Available from the summer or fall of 1990 for a recent graduate with a Ph.D. in molecular biology, cell biology, or biochemistry interested in malignant transformation and cellular differentiation. Expertise in one or more of the following areas is desirable: molecular genetics, virology, or protein chemistry. Send curriculum vitae and names of three references to: Mark A. Israel, M.D., University of California, Department of Neurosurgery, Brain Tumor Research Center, HSW-783, Parnassus Avenue, San Francisco, CA 94143. *Equal Opportunity/Affirmative Action Employer.*

SITUATIONS WANTED

RISK ANALYST, Ph.D; 18 years of government, national laboratory, consulting experience. Good communicator. Creative, innovative, skillful marketer. Environmental assessment, managerial background. Box 1, SCIENCE.

COURSES AND TRAINING

ANALYTICAL AND QUANTITATIVE LIGHT MICROSCOPY IN BIOLOGY, MEDICINE, AND MATERIALS SCIENCE—10-18 May 1990. This course, which is designed for professional researchers, advanced graduate students, and industrial scientists and engineers, provides an in-depth examination of the theory of the microscope and application of video for exploring subtle interactions between light waves and the specimen. Limited to 22 students. Co-directors: Edward D. Salmon, University of North Carolina, Chapel Hill, and Greenfield Sluder and David E. Wolf, Worcester Foundation for Experimental Biology. Application deadline: 10 March 1990. For further information and application forms, contact: Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 508-548-3705, ext. 216.

HOW TO MAKE MICROCAPSULES: A HANDS-ON COURSE

A laboratory course designed to teach the art and science of microcapsule making. Suitable for biologists, pharmacists, chemists, life scientists, and engineers. Enrollment limited to 12. Lectures and laboratory sessions by Dr. Curt Thies, Professor of Chemical Engineering at Washington University in St. Louis. Spring sessions: 18 to 21 March and 1 to 4 April 1990. Call for information. Telephone: 314-889-6066.

GRADUATE TRAINING PROGRAM IN MOLECULAR BIOPHYSICS. The Roswell Park Graduate School offers training in molecular biophysics leading to the Ph.D. degree in biophysics. Opportunities for graduate research in many areas related to the cancer problem with emphasis on biomolecular structure/function studies. Assistantships and fellowships provide tuition waiver and \$10,000 per calendar year. Participating faculty are affiliated with Roswell Park Cancer Institute, the nation's oldest cancer research institute, and the State University of New York at Buffalo. Address inquiries to: Dr. Harold C. Box, Chairman, Biophysics Department, Roswell Park Cancer Institute, Buffalo, NY 14263. *An Equal Opportunity/Affirmative Action Employer.*

TRAINEESHIPS: TOXIC SUBSTANCES. Graduate traineeships are available from the environmental and ecological instruction and training program at the University of California, Davis. Trainees will receive an appointment with faculty conducting research on transport, fate, exposure, and effects of toxic substances in ecosystems. Applicants must be admitted into one of several graduate groups for study toward the M.S. or Ph.D. degree. Inquiries should be directed to: Dr. Dennis E. Rolston, Land, Air, and Water Resources, University of California, Davis, CA 95616. Telephone: 916-752-2113.

POSTDOCTORAL TRAINEESHIP. Applications are invited for a recent Ph.D. to participate in a recently established molecular cytogenetic research program at the Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, Philadelphia, Pennsylvania. The trainee will have an opportunity to learn chromosomal in situ hybridization and other specialized techniques in an ongoing effort to map genes associated with several solid tumor malignancies as well as related genetic disorders. Participation in related research projects in other laboratories will be encouraged. Some previous experience in human cytogenetics will be helpful. Send résumé and references to: Dr. Linda A. Cannizzaro, Medical Research Building, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. *Temple University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

RESEARCH PROGRAMS FOR POSTGRADUATES, FACULTY, AND STUDENTS AT DEPARTMENT OF HEALTH AND HUMAN SERVICES laboratories including the Agency for Toxic Substances and Disease Registry (Atlanta), Center for Devices and Radiological Health (Rockville, Maryland), and National Center for Toxicological Research (near Little Rock). *U.S. citizenship or PRA status required.* For information (please indicate postgraduate, faculty, and/or student program), contact: Research Participation Programs/DHHS, Attention: M. Mayton, Science/Engineering Education Division, Oak Ridge Associated Universities, Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.

COURSES AND TRAINING

COMPACT FREEZE-DRYING COURSE: Fundamental Aspects of the Preservation of Sensitive Biologicals.

A 3-day international course covering the principal issues involving the freezing and freeze-drying of pharmaceuticals, biological cultures (viruses, bacteria, cells, etc.) and derivative biological materials (vitamins, antibodies, enzymes, etc.).

Presented by the American Type Culture Collection and the Merieux Foundation, 2 to 4 April 1990; Mayflower Hotel, Washington, D.C. Contact: ATCC Workshops, 12301 Parklawn Drive, Rockville, MD 20852. Telephone: 301-231-5566. FAX: 301-770-2587.

MEETINGS

FIRST INTERNATIONAL CONFERENCE ON HUMAN ANTIBODIES AND HYBRIDOMAS 18 to 20 April 1990

Orlando (Lake Buena Vista), Florida
Program Chairman: Mark C. Glassy, Ph.D.,
Biotechnetics

The scientific program will consist of keynote lectures by invited speakers, contributed papers, and poster presentations emphasizing all aspects of human hybridoma and antibody technology, including fundamental research, applied science, and clinical applications.

Contact: S. L. Patterson, Butterworths, 80 Montvale Avenue, Stoneham, MA 02180. Telephone: 617-438-8464, ext. 234.

ANNOUNCEMENTS

The McDonnell-Pew Program in Cognitive Neuroscience is now accepting **APPLICATIONS FOR INDIVIDUAL GRANTS-IN-AID** to support research and training in cognitive neuroscience.

Applications are sought for research projects and training projects of exceptional merit that are not currently fundable through other channels, and from investigators who are not already supported by institutional grants under this program. Preference will be given to projects that require collaboration or interaction between at least two subfields of cognitive neuroscience. The goal is to encourage broad participation in the development of the field and to facilitate participation by investigators outside the major centers of cognitive neuroscience. Submissions will be reviewed by a program advisory board, chaired by Professor George A. Miller of Princeton University. Support for research grants under this component is limited to \$30,000 per year for 2 years, with indirect costs limited to 10% of direct costs. These grants are not renewable. Support for training grants will be funded at prevailing rates at the host institution, and will be renewable annually for periods up to 3 years.

For further information, contact: The McDonnell-Pew Program in Cognitive Neuroscience, Green Hall 1-N-6, Princeton University, Princeton, NJ 08544-1010. Telephone: 609-258-5014.

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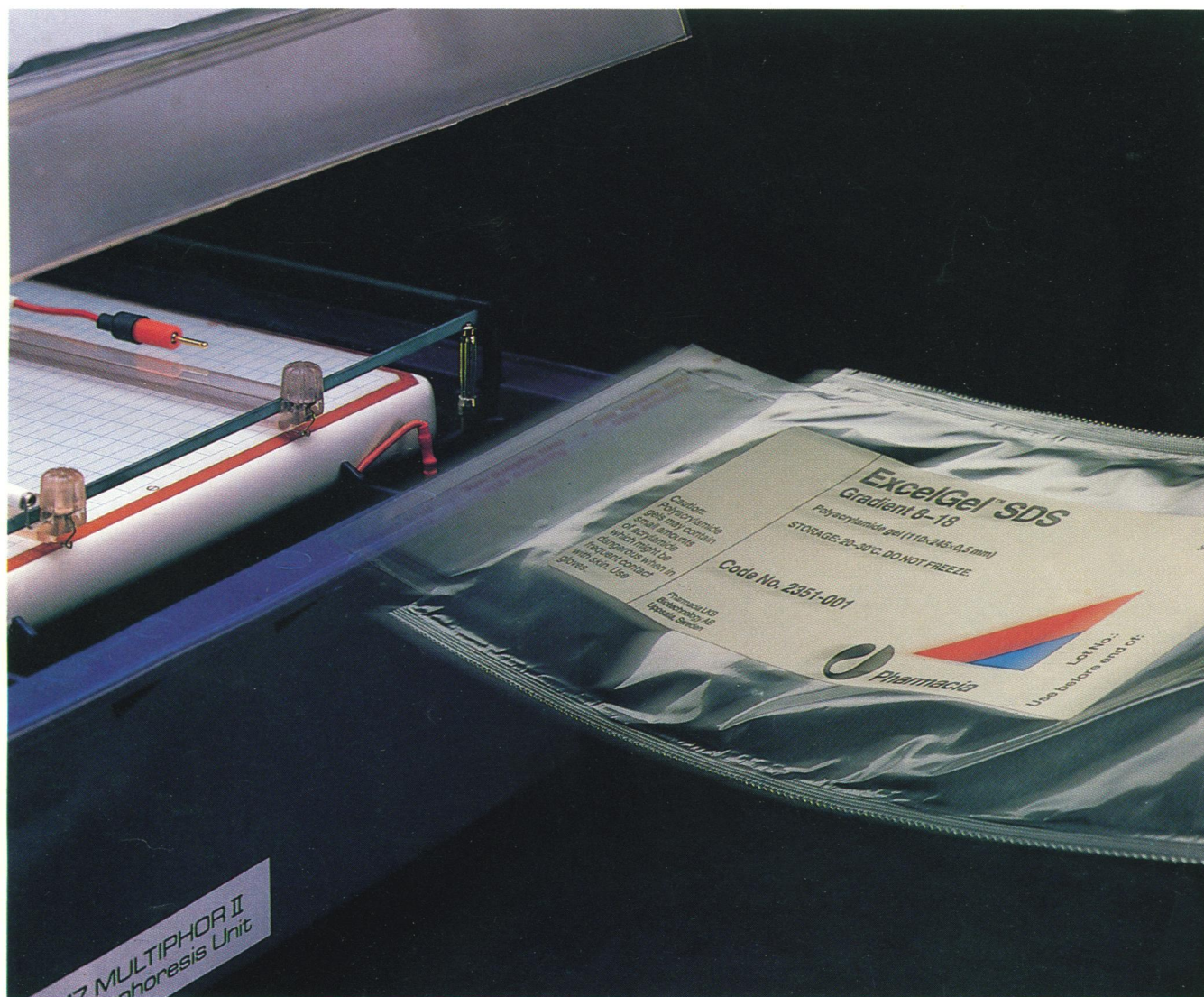
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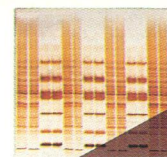
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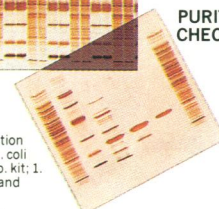
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ROUTINE ANALYSIS



PURITY CHECKING



Purity checking of a purification process, from left to right: E. coli starting material, LMW calib. kit; 1. purification, 2. purification and final purification.

SEPARATION CONDITIONS

Sample: Human growth hormone (kindly donated by KABI, Sweden). Samples are reduced and iodoacetamide treated.
Concentration: 0.1 mg/ml.
Application: 5 µl, as a droplet.
Conditions: 600 V, 50 mA, 30 W, 15°C, time, 80 min.
Detection: Silver staining, according to the J. Heukeshoven and R. Dernick method, with slight modifications.

Routine analysis of a large amount of samples, from left to right: Repeatedly: E. coli, HMW calib. kit; LMW calib. kit.

SEPARATION CONDITIONS

Sample: E. coli
Concentration: 0.1–0.2 mg/ml.
Application: 5 µl, with a sample applicator.
Conditions: 600 V, 50 mA, 30 W, 15°C, time, 80 min.
Detection: Silver staining, according to the J. Heukeshoven and R. Dernick method, with slight modifications.

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