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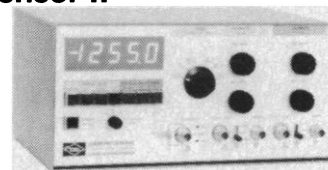


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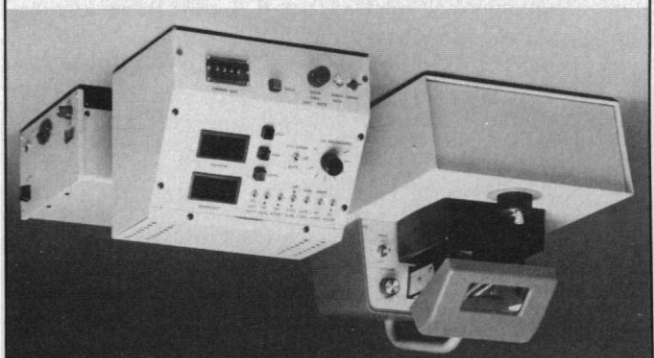
The NAS invites applications from American scientists who wish to make visits to the USSR, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and Yugoslavia. The program of individual exchanges will support one- to 12-month research visits during calendar year 1992. The program of two-week project development visits will support two cycles of visits: April through August 1991 and August through December 1991. Applicants for the project development visits need to demonstrate that a joint proposal for collaborative research will be prepared during their visit for submission to the National Science Foundation for funding. There is special emphasis on young investigators in each program.

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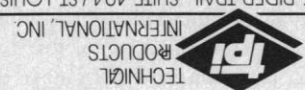
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Edited by Michael S. Teitelbaum and Jay M. Winter

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1989; 318 pp.

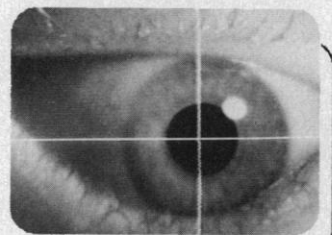
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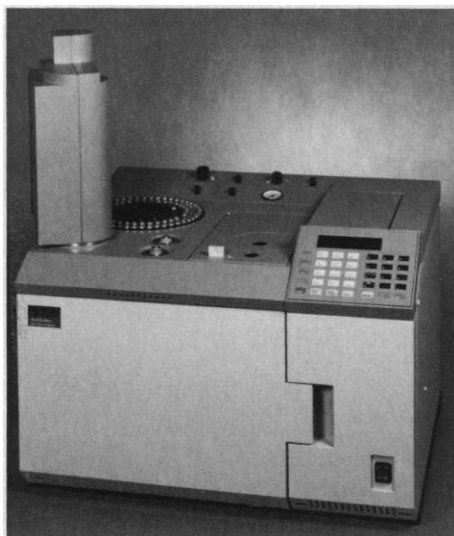
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ChemWords is a spell checker containing more than 30,000 chemistry terms for use on Apple Macintosh computers. This software is available in Microsoft Word 4.0-, MacWrite II-, or WordPerfect-compatible versions and requires a hard disk. Scientific Software. Circle 512.

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Accessories to Preserve and View Gels

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maximum force applied prior to release, while another gauge measures the strength of the hindlimbs. The instrument provides an objective indication of peripheral motor neuropathy and should find applications in the fields of toxicology, pharmacology, and neurophysiology. Columbus Instruments. Circle 510.

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Literature

Software for Complex Scientific Problem Solving, 1990-91 Product Catalogue contains 32 pages of product descriptions and technical notes on software products that include high-quality graphic output. The programs described range from graphing to curve fitting to modeling and pharmacokinetic analysis. MicroMath Scientific Software. Circle 536.

Waters Capillary Electrophoresis Database include a collection of more than 250 articles. It includes references on the technology, its development and applications, and recent discoveries. The database can be personalized by adding or deleting articles, and Waters will periodically supply updates. The database runs on any IBM-compatible computer with 523 K of memory. Waters, Division of Millipore. Circle 537.

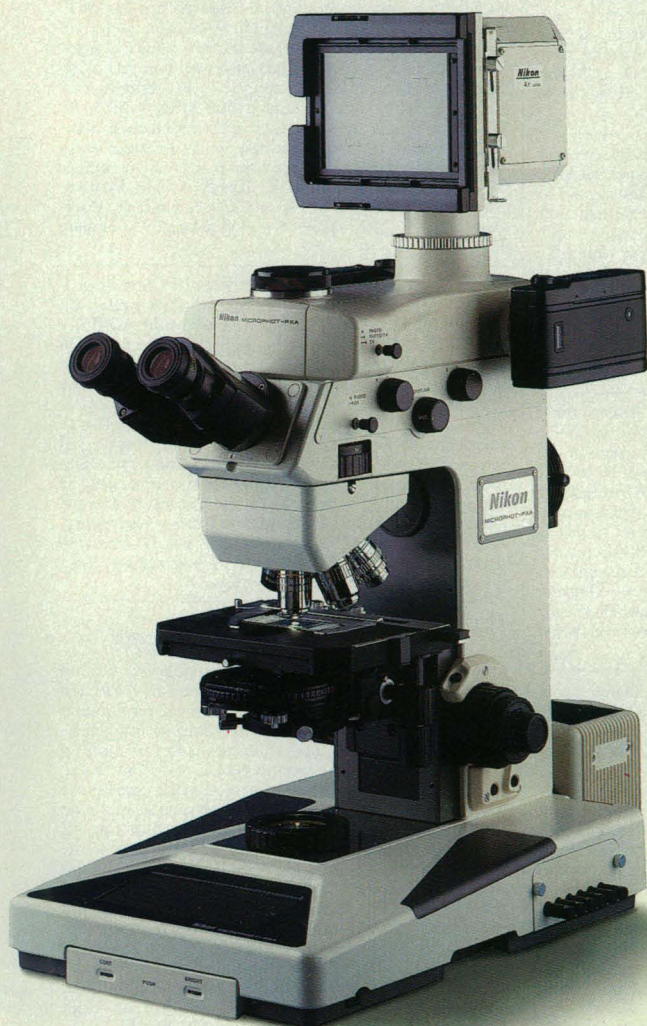
EasyLIMS is an eight-page brochure describing personal computer software for the smaller but growing laboratory. The software runs on IBM-PC and PS/2 computers. Beckman Instruments. Circle 541.

1990 Electrophoresis Catalog contains a complete line of reagents, new stains, and equipment for use in protein and DNA electrophoresis. Integrated Separation Systems. Circle 542.

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POSITIONS OPEN

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Emory University: The Department of Chemistry of Emory University invites applications for a tenure-track position in ORGANIC CHEMISTRY at the ASSISTANT PROFESSOR level or higher beginning in fall 1991. Candidates in all fields of organic chemistry are encouraged to apply. The successful candidate will be expected to develop an outstanding and productive program of creative and original research. A commitment to excellence in undergraduate and graduate teaching is required. Applicants should send curriculum vitae, statement of research plans, and arrange for the submission of three letters of recommendation to: **Professor Dennis Liotta, Department of Chemistry, Emory University, Atlanta, GA 30322.** All applications will be reviewed beginning 1 November 1990. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

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POSITIONS OPEN

ANIMAL BEHAVIOR

The Department of Biology of Pomona College invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** beginning fall 1991. The successful applicant will have a broad background in organismal biology with a focus on animal behavior and will teach an undergraduate course in animal behavior and at least one additional course, in a field such as evolution, vertebrate physiology, or physiological ecology. The appointee will teach one course each semester and participate in team-teaching introductory biology. He/she will be expected to establish an active research program for which start-up funds are available. Pomona College is a 4-year, selective liberal arts college that encourages undergraduate research. *We particularly welcome applications from women and minorities.* Send curriculum vitae, statements of research and teaching interests, proposing specific courses to be taught, and three letters of recommendation to: **Dr. Paulette Bierzchudek, Search Committee Chair, Department of Biology, Pomona College, Claremont, CA 91711.** To assure full consideration, applications should be received by 9 November 1990.

PLANT GENETICS

INDIANA UNIVERSITY, BLOOMINGTON

The Department of Biology is initiating a search for an **ASSISTANT PROFESSOR** of plant genetics. Individuals active in any aspect of plant genetics are encouraged to apply. The successful candidate will be expected to conduct a vigorous, independent research program and contribute to teaching. Applicants should have postdoctoral research experience and demonstrated ability as creative scientists. Send curriculum vitae and a brief description of research interests, and arrange to have three letters of reference sent to: **Plant Genetics Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405.**

Applications received before 1 December 1990 will be assured of consideration.

Indiana University is an Affirmative Action/Equal Opportunity Employer.

PLANT ECOLOGIST. The Department of Biological Sciences, University of Denver, seeks applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning 1 September 1991. The successful applicant will be expected to demonstrate research productivity, actively pursue extramural support, and direct graduate students at the M.S. and Ph.D. levels. Teaching responsibilities will include an undergraduate course in plant ecology, a field methods course, and other courses dependent on research interests but consistent with conducting a strong research program. Postdoctoral experience preferred. Applicants should send curriculum vitae, statement of research and teaching plans, and three letters of reference to: **Chair, Plant Ecologist Search Committee, Department of Biological Sciences, University of Denver, Denver, CO 80208.** Deadline: 15 December 1990. *The University of Denver is committed to enhancing the diversity of its faculty and strongly encourages applications from minorities and women.*

PHYSIOLOGICAL PSYCHOLOGY/NEUROSCIENCE. The Department of Psychology is seeking applications for a tenure-track appointment in physiological psychology at the **ASSISTANT PROFESSOR** level beginning academic year 1991-92. The successful applicant should have a Ph.D., preferably with at least 2 years of productive postdoctoral training. Candidates will be expected to develop an independent research program that will integrate well within the physiological area of the department and the campus interdepartmental neuroscience program.

Duties will include graduate student supervision and undergraduate teaching. We are especially interested in candidates whose research experience encompasses neurophysiological or neurochemical mechanisms relevant to behavioral plasticity, motivated behaviors, or sensory integration.

Applicants should submit curriculum vitae, a description of their current and future research program, and arrange for at least three letters of reference to be sent to: **J. H. Ashe, Chair, Search Committee, Department of Psychology, University of California, Riverside, CA 92521.** Completed applications must be received by 1 December 1990. *The University of California is an Equal Opportunity/Affirmative Action Employer. Minority and female applicants are encouraged to apply.*

12 OCTOBER 1990

University of Utah School of Medicine ANNOUNCES THE CREATION OF AN INTERDEPARTMENTAL Program in Human Molecular Biology & Genetics

The Program is designed to provide an optimal environment for young scientists engaged in studies of the molecular basis of human biology and disease. We plan to establish a community of 15 to 20 investigators. The Program will occupy three floors in the new George S. and Dolores Dore Eccles Building, an attractive, state-of-the-art research facility. Applicants should have an M.D. or Ph.D. degree, or both, and appropriate postdoctoral experience. Participants will have an academic appointment in basic science or clinical departments and the Program.

Appointments to the Program will have a duration of 5 years, during which the participants will receive substantial institutional support and will have approximately 90% of their time available for research. Participants will be expected to establish an active, independent research program. Appointments in the Program may be renewed at the completion of the 5 year term, or participants may assume a full-time role in the parent department depending on the goals of the individual department and the Program at that time.

Stephen M. Prescott, M.D., Director
Program in Human Molecular Biology & Genetics
University of Utah, Bldg 500
Salt Lake City, UT 84132

The Division of Cardiology, Department of Internal Medicine Assistant or Associate Professorship

The targeted area of research interest is the molecular biology of vascular disease, including atherogenesis and thrombosis. The area of investigation might include studies of endothelial cells, other cells of the vessel wall, or the interaction of blood cells with the vessel wall. Applicants should have a Ph.D. or M.D. degree, or both, and sufficient advanced research training to be able to initiate an independent research program. The clinical service commitment for MD's will be sharply limited to allow the establishment of an active research program. The academic rank and salary will be based on the qualifications of the applicant. Interested individuals should send a curriculum vitae, the names of three references, and a statement of research interests to: Stephen M. Prescott, M.D. or Jay W. Mason, M.D., Chief, Division of Cardiology, University of Utah Medical Center, Salt Lake City, UT 84132.

The Department of Human Genetics Assistant Professorship

The targeted area of research interest is the molecular genetics of malignancy and applicants with this focus will be given preference. Applicants should have a Ph.D. or M.D. degree, or both, and sufficient advanced research training to be able to initiate an independent research program. The service commitment will be sharply limited to allow the establishment of an active research program. Interested individuals should send a curriculum vitae, the names of three references, and a statement of research interests to: Stephen M. Prescott, M.D. or Raymond L. White, Ph.D., Co-chairman, Department of Human Genetics, University of Utah Medical Center, Salt Lake City, UT 84132.

The Department of Pediatrics Assistant Professorship

Applicants should have an M.D. degree, or both M.D. and Ph.D. degrees, and appropriate training in the diagnosis and management of infectious diseases in children. They also should have sufficient advanced research training to be able to initiate an independent research program. The area of research interest is limited only to a requirement that it deal at the molecular or cellular level with an important aspect of human biology or disease. The clinical service commitment will be sharply limited to allow the establishment of an active research program. Interested individuals should send a curriculum vitae, the names of three references, and a statement of research interests to: Stephen M. Prescott, M.D. or Michael A. Simmons, M.D., Chairman, Department of Pediatrics, University of Utah Medical Center, Salt Lake City, UT 84132.

Division of Rheumatology, Department of Internal Medicine Assistant Professorship

Applicants should have an M.D. degree, or both M.D. and Ph.D. degrees, and appropriate training in the diagnosis and management of rheumatological diseases. They also should have sufficient advanced research training to be able to initiate an independent research program. The targeted area of research interest is molecular immunology and applicants with this focus will be given preference. The clinical service commitment will be sharply limited to allow the establishment of an active research program. Interested individuals should send a curriculum vitae, the names of three references, and a statement of research interests to: Stephen M. Prescott, M.D. or H. James Williams, M.D., Chief, Division of Rheumatology, University of Utah Medical Center, Salt Lake City, UT 84132.

THE UNIVERSITY OF UTAH IS AN EQUAL OPPORTUNITY EMPLOYER AND ENCOURAGES APPLICATIONS FROM MEMBERS OF MINORITY GROUPS AND FROM WOMEN.

POSITIONS OPEN

BEHAVIORAL NEUROSCIENTIST

The University of Virginia (UVA), Department of Psychology, invites applications for an anticipated tenure-track, **ASSISTANT PROFESSOR** position to begin August 1991. We seek an individual with multidisciplinary approaches to the study of brain and behavior relationships. The successful applicant will join an active psychobiology group within the department and will also participate in the interdepartmental Neuroscience Graduate Program. Submit curriculum vitae, statement of research interests, and three letters of recommendation by 1 December 1990 to: **Dr. Peter C. Brunjes, Chair, Psychobiology Search Committee, Department of Psychology, Life Sciences Building, University of Virginia, Charlottesville, VA 22903.** UVA is an Affirmative Action/Equal Opportunity Employer.

CELL BIOLOGIST. The Department of Biological Sciences, University of Denver, seeks applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning 1 September 1991. The research area of the applicant must include ultrastructural biology. Requirements for the position include a Ph.D. and at least 2 years of postdoctoral experience, and interest in teaching at the undergraduate and graduate levels, the demonstrated ability to attract extramural research funding, and a willingness to direct graduate students at the M.S. and Ph.D. levels. Teaching responsibilities include lectures in the undergraduate core curriculum and specialty courses consistent with the applicant's research interests. Research facilities include a Hitachi 3000 electron microscope with support facilities. Applicants should send curriculum vitae, statements of research and teaching goals, and three letters of reference to: **Chair, Cell Biologist Search Committee, Department of Biological Sciences, University of Denver, University Park, Denver, CO 80208.** Deadline: 15 December 1990. *The University is committed to enhancing the diversity of its faculty and strongly encourages applications from minorities and women.*

NEUROBIOLOGIST

The Biology Department of Holy Cross College seeks to fill a tenure-track position at the rank of **ASSISTANT PROFESSOR.** The successful candidate must hold a Ph.D. at the time of appointment and will be expected to develop an active research program involving undergraduate students. The research should have a cellular or molecular orientation and must be compatible with the environment of a liberal arts college. Teaching responsibilities include a course in neurobiology, participation in introductory biology courses for biology and psychology majors, and development of a course for nonscience majors. Holy Cross is a highly selective liberal arts college with an enrollment of 2600 students. It values excellence in both undergraduate teaching and research. Applications, consisting of curriculum vitae, copies of publications, and a list of four referees, should be submitted no later than 15 November 1990 to: **Dr. Susan L. Berman, Chair, Search Committee, Department of Biology, College of the Holy Cross, Worcester, MA 01610.** Women and minorities are strongly encouraged to apply. *Holy Cross is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR IN IMMUNOLOGY

The Immunology Unit of The Toronto Hospital Arthritis Center and the Department of Immunology, University of Toronto, wish to recruit an assistant or associate professor to join a multidisciplinary research group with interest in cellular and molecular immunology. We plan to expand on current strengths in molecular biology, cellular immunology, microbiology, and immunogenetics to address the fundamental pathogenesis of immunological diseases. Applications are invited from researchers with Ph.D. or M.D. degree with appropriate postdoctoral research training.

Canadian immigration guidelines require that consideration be given in the first instance to Canadian citizens and permanent residents of Canada.

Inquiries and applications (curriculum vitae and names of three references) should be addressed to:

Dr. R. D. Inman
Departments of Medicine and Immunology
Toronto Western Hospital
399 Bathurst Street
Toronto, Ontario, Canada M5T 2S8
FAX: 416-369-6477

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR AND CELLULAR BIOLOGY

The Department of Microbiology and the College of Medicine at the University of Illinois (Urbana-Champaign) seek candidates for a full-time tenure-track faculty position at the assistant professor level. Applicants should have a Ph.D. or M.D. degree, postdoctoral experience, and show exceptional promise in developing an active research program in molecular and cellular biology. Research areas of particular interest include, but are not limited to, molecular aspects of pathogenesis, microbial physiology and genetics, and molecular parasitology. Responsibilities include teaching medical and graduate students. Starting date: August 1991. Salary commensurate with experience.

The Department of Microbiology offers a supportive and collegial atmosphere, and strong graduate program. There are extensive interdepartmental interactions in microbial and eukaryotic cell and molecular biology, virology, immunology, neurobiology, developmental biology, evolution, biochemistry, and biophysics. The University of Illinois (Urbana-Champaign) offers an outstanding and exciting academic research environment including a new Biotechnology Center and state-of-the-art facilities for molecular engineering, hybridoma production, flow cytometry, electron microscopy, x-ray crystallography, and computer analyses.

Applicants should submit curriculum vitae and statement of research interests, and arrange to have three letters of reference sent to:

Sondra G. Lazarowitz
Department of Microbiology
University of Illinois
131 Burrill Hall
407 South Goodwin Avenue
Urbana, IL 61801
Telephone: 217-333-1736

Closing date for applications is 15 December 1990. Interviews may be conducted prior to 15 December; however, all applications received by the closing date will be given full consideration. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY

Mercer University School of Medicine announces a tenure-track position in psychology. The appointee is expected to participate in the problem-based teaching of medical students and to develop an independent research program. Consideration will be given to qualified applicants in any area of physiology. Applicants must possess a Ph.D. and/or M.D. and postdoctoral training. Applications will be accepted until the position is filled. Submit curriculum vitae, statement of career goals and objectives, and names of three references to: **Dr. Robert J. Moon, Chairman, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA 31207.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR MICROBIOLOGY AND IMMUNOLOGY

The expanding Department of Microbiology and Immunology at Wright State University is inviting applications from candidates with interests in either immunology or the molecular biology of host/pathogen interactions. A competitive applicant should possess a Ph.D. or M.D. with high potential for the development of an independently funded and productive research program. Although preference will be given to candidates with research interests compatible with a growing and vital interdisciplinary reproductive biology interest group, other applicants are encouraged. The department is located within the School of Medicine and the College of Science and Mathematics with teaching responsibilities for medical, nursing, and medical technology students, as well as graduate students in the Ph.D. Program in Biomedical Sciences. This position is a 12-month tenure-track appointment with available start-up funds and incentives. Send curriculum vitae, names and addresses of three references, and a statement of research and teaching interests to: **Neal S. Rote, Ph.D., Professor and Chair, Department of Microbiology and Immunology, 409 Oelman Hall, Wright State University, Dayton, OH 45435.** Evaluation of applicants will begin 1 November 1990 and continue until a suitable candidate is recruited. *Women and minorities are encouraged to apply. Wright State University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR in microbiology with a specialty in virology. Applications are invited for a tenure-track position with flexible starting date in the microbiology department. The department is responsible for teaching basic microbiology to dental undergraduate and postgraduate students. The successful applicant will be expected to teach, pursue an active research program in his/her area of expertise and interact strongly with the graduate program at the university. The applicant will also be expected to interact with members of the basic and clinical research departments of the dental school.

Applicants should submit a letter of application, curriculum vitae, a statement of teaching and research interests, and the names of at least three references to:

Dr. Joel Rosenbloom
Associate Dean for Research
School of Dental Medicine
University of Pennsylvania
4001 Spruce Street
Philadelphia, PA 19104

Position at the rank of **ASSISTANT OR ASSOCIATE PROFESSOR** in the Department of Biological Sciences at the University of Alaska Anchorage (UAA). The position is full time, 9 months, tenure track, and funded through the UAA biomedical program which is part of the medical education agreement between the University of Washington School of Medicine and the states of Washington, Alaska, Montana, and Idaho (WAMI). Annual teaching responsibilities are either a cell pathology or neuroscience course for first year students and one to two courses for undergraduate and graduate biology majors. The successful candidate must have a Ph.D. or M.D., postdoctoral research experience, and a strong potential to develop a research program and attract extramural funding. Research interests must complement the needs and resources of the biomedical program and should include some aspect of cell biology, molecular biology, neurobiology, immunology, or microbiology. An affiliate faculty position at the University of Washington School of Medicine is possible.

Salary: Competitive, based on experience.

Application procedure: Submit a letter of application briefly stating teaching experience in cell pathology or neuroscience and research interests, curriculum vitae, and names, addresses, and telephone/FAX numbers of three references to: **Michael J. Dimino, Ph.D., Director, Biomedical Program, University of Alaska Anchorage, 3211 Providence Drive, Anchorage, AK 99508.**

Closing date: All application materials must be received by 30 November 1990.

TERRY FOX CANCER RESEARCH GROUP

Sir Mortimer B. Davis-Jewish General Hospital and McGill University are seeking a **GROUP LEADER** for a planned group of four investigators in basic cancer research. This is a tenure-track position in conjunction with the Department of Oncology at McGill University. The primary emphasis is on basic research but preference will be given to candidates whose programs interact at a clinical level. Molecular genetics of human tumors, drug resistance, and growth factor biology are areas of potential interest. An excellent clinical research program now exists and comprehensive support from a Terry Fox Team Development grant will be used to develop a strong complementary basic research program. It is envisaged that the research group will take advantage of the clinical information and material to develop the goals of the laboratory programs.

The group leader should hold a Ph.D. or M.D. degree, have significant research experience, preferably in a leadership capacity, and have the potential for developing a vigorous independent cancer research program. It is intended that the group leader will play a major role in the selection of the research team.

Excellent laboratory facilities, start-up funds, and infrastructure support at the Lady Davis Institute and at McGill University are available.

Salary will be commensurate with experience.

Please send curriculum vitae, a brief statement of research goals, and the names of three referees to:

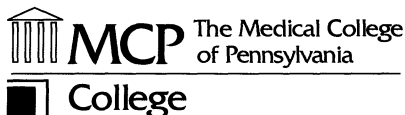
Richard G. Margolis, M.D., F.R.C.S.(C)
Herbert Black Professor of Surgery
Director of Oncology
Jewish General Hospital
3755 Cote Ste. Catherine
Montreal, Quebec, Canada H3T 1E2

**THE MEDICAL COLLEGE OF
PENNSYLVANIA
CHAIR
DEPARTMENT OF ANATOMY AND
NEUROBIOLOGY**

The Medical College of Pennsylvania invites applications and nominations for the position of Chair, Department of Anatomy and Neurobiology. The department currently has ten full time Faculty members with a strong emphasis on Neuroscience research ranging from molecular to behavioral studies. The faculty is well funded and, in addition, has a NIH funded Program Project Grant on mechanisms of recovery from spinal cord injury and a funded postdoctoral program. The number of individuals, including staff, pre and postdoctoral students and faculty, totals sixty-three.

We seek a distinguished scientist and educator in cell, developmental, molecular, or neurobiology or genetics with proven ability in Administration who can lead and expand the department. The Medical College of Pennsylvania is undergoing an expansion phase of its physical facilities that will allow the potential for the addition of faculty and space to the department.

A letter of interest or nomination, curriculum vitae, and the names of at least three references should be sent by October 31, 1990 to **George L. Popky, M.D., Chair, Anatomy and Neurobiology Search Committee, Professor and Chairman, Department of Radiologic Sciences, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pennsylvania 19129.** Equal opportunity/affirmative action employer.



**DEAN, SCHOOL OF MARINE SCIENCE
DIRECTOR, VIRGINIA INSTITUTE OF MARINE SCIENCE
OF THE
COLLEGE OF WILLIAM AND MARY**

Nominations and applications are invited for the joint position of Dean, School of Marine Science (SMS), and Director, Virginia Institute of Marine Science (VIMS). VIMS/SMS is dedicated to development of new knowledge through programs of research, to graduate education, and to provision of technical advice relating to the marine resources of Virginia.

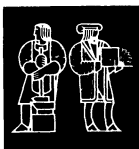
The academic program offers M.A. and Ph.D. degrees in Marine Science. Regional, national, and international research programs encompass a broad spectrum of marine science and marine resource management disciplines, with emphasis on estuarine and coastal waters.

The successful candidate will be expected to provide outstanding administrative and programmatic leadership to growing academic and research programs and to provide effective communication with public, corporate, and governmental groups. The scholarly achievements of this individual should be appropriate for appointment as a full professor. At present, the Dean and Director administers a scientific and support staff of approximately 325, 61 of whom are academic faculty; an annual operating state general fund budget of approximately \$11.2 million; a research vessel fleet; and a large physical plant. The graduate student body numbers approximately 130. In FY 89-90 active extramural research awards were approximately \$11 million. Nominations, or, in the case of applicants, a letter of application, detailed resume, and names and addresses of at least three references, should be sent to:

Professor Robert J. Byrne, Search Chair
Virginia Institute of Marine Science
School of Marine Science
College of William and Mary
Gloucester Point, Virginia 23062.

The Search Committee will begin reviewing applications by 1 December 1990 and will continue the review and interview process until the position is filled. The preferred starting date for the position is 1 July 1991.

The College of William and Mary is an Equal Opportunity, Affirmative Action Employer. Women and minorities are encouraged to apply.



**ASSISTANT PROFESSOR OF
CHEMICAL ENGINEERING**

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Applicants are invited for a junior-level, tenure-track faculty position in the Department of Chemical Engineering. Applicants should have a Ph.D. in Chemical Engineering or a closely related field, should have demonstrated excellence in academic research, and should have a strong interest in teaching graduate and undergraduate chemical engineering. Applicants are preferred with research interests in either combustion science and fuels engineering, high temperature chemistry, catalysis or polymer chemistry. Outstanding candidates with other research interests will be considered. Send resume including the names of at least three references, graduate transcripts and a description of research interests to: Dr. Robert A. Brown, Head, Dept. Chem. Engng., Massachusetts Institute of Technology, Cambridge, MA 02139. Material should be received by January 15, 1991. **MIT is an Equal Opportunity, Affirmative Action Employer.**

**ASSISTANT PROFESSOR
MOLECULAR NEUROBIOLOGY**

THE SALK INSTITUTE

The Salk Institute for Biological Studies invites applications for a faculty appointment in the Neurosciences. We seek candidates with research interests in the application of molecular genetics to the study of the nervous system. Current areas of research include ion channel biophysics (Chuck Stevens), neurotransmitter receptors (Steve Heinemann), vertebrate neural development (Dennis O'Leary), *Drosophila* neural development (John Thomas), neural induction (Chris Kintner), myelination (Greg Lemke), and visual system physiology (Charles Gray).

Interested individuals should submit a curriculum vitae, a brief statement of present and future research interests, and the names of three references to:

**Molecular Neuroscience Search Committee
The Salk Institute
P.O. Box 85800
San Diego, CA 92186-5800**

Equal Opportunity Employer M/F/H/V.

Public Health Service • National Institutes of Health
National Cancer Institute

A Senior Executive Service Vacancy

**Associate Director
Developmental Therapeutics Program
Division of Cancer Treatment**
Location: Rockville, Maryland

The Associate Director, Developmental Therapeutics Program (DTP), will be responsible for the planning, direction and implementation of a broad national and international program of drug discovery and development designed specifically to maintain a continuous flow of therapeutic agents and materials from laboratory clinics for the treatment of cancer and AIDS. The DTP is composed of three distinct segments with an annual funding level of approximately \$117 million. The segments consist of a large extramural contract-based drug-development program (approximately \$50 million), a grant-supported Biochemistry and Pharmacology program (approximately \$60 million), and an intramural, laboratory oriented research program (approximately \$7.5 million) exclusive of salaries and related fringe benefits. The DTP staff consists of approximately 275 scientific and supporting personnel.

This is a Civil Service position in the Senior Executive Service (SES) with an annual salary compensation between ES-1 through ES-4 (currently \$71,200 to \$79,200). 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 at least one of the following: Medical Officer, GS-602; Chemist, GS-1320; Microbiologist, GS-403; Pharmacologist, GS-405; Biologist GS-401; or Health Science Administrator, GS-601; as defined by the U.S. Office of Personnel Management Handbook X-118 (Qualification Standards for Positions under the General Schedule), which is available in Federal Personnel Offices. Applicants must also 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. Sue Hickman 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 3A16,
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 October 26, 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 or mental handicap, age, or membership or non-membership in an employee organization.

UNIVERSITY
OF NEVADA
RENO

**VICE PRESIDENT FOR
ACADEMIC AFFAIRS**

The University of Nevada, Reno invites nominations and applications for the position of vice president for academic affairs. We seek a dynamic, innovative individual who will provide leadership necessary to meet the challenges associated with a growing university.

The University: Founded in 1864 as a land-grant institution, the University of Nevada, Reno is the state's oldest campus. With 700 faculty, the university consists of the Fleischmann College of Agriculture, the College of Arts and Science, the College of Business Administration, the College of Education, the College of Engineering, the College of Human and Community Sciences, the Reynolds School of Journalism, the School of Medicine, the Mackay School of Mines, the Orvis School of Nursing, and the Graduate School. The campus also is home for numerous research centers, clinics, and institutes.

With a steadily-growing enrollment of more than 11,000, our students represent all 50 states and more than 60 foreign countries. Undergraduates pursue degrees in more than 70 major programs. There are more than 2,000 graduate students in 60 master's degree and 21 doctoral programs. Last year, funding for scholarship and research increased by more than 25% to nearly \$30 million.

The Community: Nevada itself is one of the fastest growing states in the nation. The Reno metropolitan area of 240,000 is located just northeast of Lake Tahoe in the foothills of the Sierra and is the urban and cultural center of northern Nevada and northeastern California. The university system, state government, and industry are partners in a successful program to diversify the state's already healthy economy.

The Position: The academic vice president at the University of Nevada, Reno is the academic leader of the university community. The vice president oversees all academic personnel and programs, has budget responsibility for the academic side of university operations, supervises the allocation of resources in academic areas, chairs the council of deans, and reports directly to the president.

Desired qualifications include faculty and administrative experience at a research university, appreciation for the role of a land-grant university, academic credentials that meet the criteria of a full professor with tenure in an academic department of the university, strong interpersonal skills, and demonstrated abilities in academic innovation, program development, personnel management, and budgetary planning. The vice president must be committed to Affirmative Action and cultural diversity, and be able to clearly articulate the complex goals, missions and needs of the university.

Nominations are encouraged. Applications should be received by November 15, 1990, when screening will begin. The position is available July 1, 1991, but will remain open until filled. Salary will be competitive. Women and ethnic minorities are especially encouraged to apply.

Applications should include the following: a letter of interest; a curriculum vitae; names, addresses, and telephone numbers of five references. Please send nominations and applications to:

Professor Robert Mead, Chairman
VPAA Search Committee
Office of the President/001
University of Nevada, Reno
Reno, Nevada 89557
Phone (702) 784-4805

The University of Nevada, Reno is an Equal Opportunity/Affirmative Action institution and does not discriminate on the basis of race, color, religion, sex, age, national origin, veteran status, or handicap in any program or activity it operates. The university employs only U.S. citizens and those aliens lawfully authorized to work in the United States.

STAFF SCIENTISTS - NEUROPHARMACOLOGY/ NEUROBIOLOGY

REGENERON PHARMACEUTICALS, a company dedicated to developing therapeutic agents for degenerative and traumatic neurological disorders, is seeking to apply recent advances in the understanding of neuronal growth and regeneration.

REGENERON offers an exciting, collegial environment in which state-of-the-art molecular skills are brought to bear on outstanding problems in neurobiology and medicine. Key projects focus on the discovery, purification and molecular cloning of novel neurotrophic growth factors, and on the assessment of their biological roles as well as therapeutic potentials using innovative cell culture methods and animal models.

Positions in Pharmacology require a Ph.D. in Pharmacology or related discipline and a minimum of four years' post-doctoral experience in the absorption, distribution and metabolism of drugs (preferably polypeptides and proteins). Previous experience in pharmacokinetic modeling, knowledge of protein and peptide separation techniques, and delivery of drugs to the CNS are essential. Previous industrial experience is highly desirable.

Positions presently available in Neurobiology require a working knowledge of animal models of neurodegenerative disease and trauma. Parkinson's Diseases, Spinal Cord and PNS Trauma and Sensory and Motor Neuropathies are areas of particular interest. An M.D. or Ph.D. degree and a minimum of 3 yrs. postdoctoral experience is required.

REGENERON's modern facility is located on a 275-acre wooded campus in Westchester County, 20 miles north of Manhattan, near major universities and medical centers. We offer excellent compensation packages, including generous stock options. Suburban Westchester features attractive and affordable housing, outstanding public schools and recreational facilities along with ready access to the culture and business centers of New York City.

Please forward your resume, in confidence to: **Ms. Carol Deaken,**
REGENERON PHARMACEUTICALS, INC.
777 Old Saw Mill River Road
Tarrytown, NY 10591-6706
Equal opportunity employer.

REGENERON
Pharmaceuticals, Inc.

RESEARCH SCIENTISTS AND ASSOCIATE PHARMACOLOGY

Amgen, an innovative leader in the development of human therapeutic products through application of biotechnology, has immediate opportunities in our Pharmacology group.

RESEARCH SCIENTISTS Dept. #548

Candidates must have a Ph.D. in Pharmacology or related discipline and a minimum of two years' post-doctoral experience in the absorption, distribution and metabolism of drugs (preferably polypeptides and proteins). Previous experience in computerized pharmacokinetic modeling programs and knowledge of protein and peptide separation techniques are essential. Previous industrial experience is highly desirable.

RESEARCH ASSOCIATE Dept. #547

Responsibilities include analysis of putative differentiation factors in the growth of human tumor cells *in vitro* and *in vivo* as well as participation in ongoing pharmacology research projects.

Applicants must have a BS or MS in Pharmacology or a related discipline as well as experience with *in vivo* and *in vitro* cell culture assay systems including growth and maintenance of epithelial or mesenchymal cells. Experience in immuno-histochemistry and PC-based data analysis systems is highly desirable.

Amgen offers a competitive salary and benefits package as well as a stimulating and challenging research environment on the leading edge of biopharmaceutical development. Our location, about an hour drive northwest of Los Angeles, offers the best in Southern California living in an attractive community with excellent air quality and free of traffic congestion. Qualified candidates should send a resume, in confidence, to:

AMGEN, INC.
Recruitment, Dept. # (please specify)
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

Chair

Department of Biochemistry and Molecular Biology

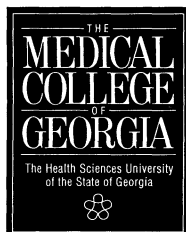
The Medical College of Georgia invites nominations and applications for the position of Professor and Chair of a newly restructured Department of Biochemistry and Molecular Biology in the School of Medicine. We seek a leader who can further develop and maintain academic excellence for this department. The successful candidate must have:

- an established record of major research accomplishment in the application of modern approaches to any area of biochemistry, molecular biology or cell biology relevant to human health and disease;
- the ability to attract and aid the development of first-rate faculty members; and
- a commitment to excellent medical and graduate education.

Applicants should provide a curriculum vitae, summary of professional goals, and the names of three references by Nov. 30, 1990 to:

R. W. Caldwell, Ph.D.
**Biochemistry and Molecular
Biology Search**
**Department of Pharmacology
and Toxicology**
Medical College of Georgia
Augusta, Georgia 30912.

Provisions of the Georgia Open-Records Act apply.



An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR CELL BIOLOGY OR NEUROBIOLOGY

The Department of Cell Biology and Anatomy, University of Health Sciences/The Chicago Medical School, has positions available at the assistant or associate professor level. Preference will be given to candidates who show the ability to teach in histology, neuroscience, or gross anatomy, and who possess or display the potential for developing an active, successful research program in cell biology or neurobiology. These positions will be filled by 1 March 1991. Send letter of application with curriculum vitae and the names of three references to: **David McCandless, Ph.D., Department of Cell Biology and Anatomy, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.**

Florida International University (FIU), the State University of Florida at Miami. Tenure-track position effective August 1991 at **ASSISTANT OR ASSOCIATE PROFESSOR** level for a person with research interests in environmental chemistry. Position is a joint, 12-month appointment between the Department of Chemistry and the Drinking Water Research Center. Ph.D. required; postdoctoral experience desirable. Active research program expected. Teaching responsibilities at both graduate and undergraduate levels in candidate's area of expertise. Closing date: 6 December 1990. Send curriculum vitae, transcripts, research plans, and three letters of reference to: **L. Keller, Department of Chemistry, Florida International University, Miami, FL 33199.** FIU is rapidly growing with over 20,000 students. A new chemistry/physics building will open in late 1990. *FIU is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACEUTICAL AND/OR NUTRITION POLICY HARVARD SCHOOL OF PUBLIC HEALTH

The Harvard School of Public Health is searching for an **ASSISTANT OR ASSOCIATE PROFESSOR** to teach and conduct applied research on fundamental policy questions related to pharmaceutical and/or nutrition policy. Topics of possible interest include public policy toward biotechnology, pesticides, food additives, and the safety of pharmaceuticals in special populations. The faculty appointment will be made in the Department of Health Policy and Management and/or the Department of Nutrition. The successful candidate is expected to develop projects in collaboration with faculty, fellows, and students affiliated with the Harvard Center for Risk Analysis. Minimum qualifications include (i) an M.D., J.D., or a doctoral degree in a relevant discipline such as toxicology, public policy, epidemiology, pharmacology, or risk analysis; (ii) a demonstrated interest in the application of science to public policy through writings and/or professional experience; and (iii) a demonstrated ability to work in an interdisciplinary environment. Knowledge of the policy-making process at the Food and Drug Administration is preferred. *Women and minorities are particularly encouraged to apply.* Send curriculum vitae and letter of application to:

Dr. John D. Graham
Ad Hoc Pharmaceutical-Nutrition Search
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115

DEVELOPMENTAL NEUROSCIENTIST

The Department of Physiology and Cell Biology invites applications for a tenure-track faculty position at the rank of **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** to start 16 August 1991. Applicant must have a Ph.D. in neuroscience or a related field, postdoctoral experience, and research experience in developmental and molecular aspects of neuroscience. The successful candidate will be expected to maintain a strong independent research program and participate in the teaching of undergraduate and graduate students. The salary will be commensurate with qualifications. Applications will be reviewed starting 1 December 1990, and thereafter until the position is filled. Applicants should send curriculum vitae, an outline of current and future research plan, and the names of three references to: **Dr. Jang-Yen Wu, Professor and Chair, Department of Physiology and Cell Biology, 3038 Haworth Hall, University of Kansas, Lawrence, KS 66045.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN



UNIVERSITY
OF DUNDEE

COX CHAIR OF ANATOMY

We are looking for an outstanding medical scientist to fill the Cox Chair of Anatomy within the recently formed Department of Anatomy and Physiology. This is the oldest chair in the university. We expect the new **PROFESSOR** to initiate exciting research in the neurosciences, applied cell biology, or developmental biology. Colleagues in clinical departments and in our highly rated Departments of Biochemistry and Biological Sciences welcome the opportunity of collaborating with the new professor.

The professor will also be expected to stimulate, develop, and take part in the teaching of modern anatomy in all its aspects. It is not necessary for the professor to have substantial first-hand experience of the teaching of gross anatomy. He or she will, however, be responsible for the teaching and will need to be responsive to the discipline and to the medical and dental schools.

The professor will be provided with newly furnished laboratory accommodation together with a generous setting-up grant. One lectureship will be made available to the chair immediately, with a second within 2 years.

Further particulars about the post and the department are available from:

The Secretary
The University
Dundee, DD1 4HN, Scotland
Telephone: 0382-23181

Please quote reference **EST/46/90/SC.**

ASSISTANT/ASSOCIATE PROFESSOR. The Institute of Paper Science and Technology (IPST) is seeking applications for a full-time position in its multidisciplinary research program on tissue culture propagation of forest trees.

The institute is an accredited, independent, 60-year-old graduate school and research center of natural sciences and engineering with support from the pulp and paper industry. Programs are conducted in an open, academic environment which strongly encourages publication, student participation, and interactions with scientists around the world. The successful candidate must possess a Ph.D. in plant physiology or biochemistry, horticulture, or related plant science, and have demonstrated expertise in applying physiological and biochemical techniques toward understanding and manipulating mechanisms underlying development, conversion, and early growth of somatic embryos and other propagules.

Applications are especially sought from accomplished scientists with the potential to attract extramural support for a vigorous research program, the ability to supervise laboratory personnel, and a strong interest in teaching and advising M.S. and Ph.D. students.

Position provides a competitive salary commensurate with qualifications and excellent benefits. Prospective candidates should forward a résumé, transcripts, statement of research interest, and three references to: **Ms. Patricia H. Hughes, IPST Personnel Manager, 575 14th Street, N.W., Atlanta, GA 30318.**

Affirmative Action/Equal Opportunity Employer.

DIRECTOR CENTER FOR CANCER TREATMENT AND RESEARCH RICHLAND MEMORIAL HOSPITAL AND THE UNIVERSITY OF SOUTH CAROLINA

The Center for Cancer Treatment and Research invites application from and nomination of individuals who have a strong background in grant-funded clinical cancer research. This person will be responsible for the overall medical and research direction of the cancer program, working with a multidisciplinary university team and a community regional teaching hospital with university appointment. Construction is currently underway for a 78-bed, free-standing building with centralized outpatient services and research laboratories due for opening in January 1992.

Interested individuals should submit their curriculum vitae and documents to: **Mr. George Fant, Chairman, Search Committee, Center for Cancer Treatment and Research, Five Richland Medical Park, Columbia, SC 29203.**

POSITIONS OPEN

MUHLENBERG COLLEGE ERLING N. JENSEN PROFESSOR IN THE NATURAL SCIENCES

Spring of 1990 search reopened. Tenure-track position as a PROFESSOR of biology and HEAD of the department, effective 1991-92. Rank and salary commensurate with qualifications and experience. Requires Ph.D. in biology, a distinguished record of scholarship, and a demonstrated commitment to excellence in teaching consistent with the tradition of a liberal arts education. Prefer those qualified and interested in covering offerings in botany. Demonstrated leadership in curricular development in the biological sciences, the ability to nurture faculty development and research programs, and administrative abilities desired.

Muhlenberg College has a full-time enrollment of 1600 and offers 35 major programs including biology and the related health professions. Send curriculum vitae and at least three reference letters to: **Chairman, Biology Search Committee, Muhlenberg College, Allentown, PA 18104, c/o Barbara Spangler.** Application review begins 3 December 1990. *Equal Opportunity Employer.*

The Harvard School of Public Health is searching for a PROFESSOR OF POLICY AND DECISION SCIENCES in the Department of Health Policy and Management. Responsibilities include teaching in the area of policy and decision sciences and leadership of the school's program in risk analysis. The mission of these programs is to foster a reasoned societal response to health, safety, and environmental hazards through training, research, and public policy analysis.

Candidates require: (i) doctoral degree in health policy, public policy, management science or a related discipline; (ii) a successful record of teaching; (iii) an outstanding record of scholarship on multiple questions of health, safety, and environmental risk; (iv) a proven ability to collaborate successfully with professionals from multiple disciplines; (v) a high degree of interest in policy-relevant research; (vi) ability to communicate effectively with policy-makers in the field; and (vi) significant evidence of the leadership skills necessary to develop the program in risk analysis.

Send curriculum vitae, a statement of research interests and future plans, up to four representative reprints, and the names of three references to: **Professor Milton C. Weinstein, Chair, Senior Search Committee, c/o Ms. Pacheco, 677 Huntington Avenue, Boston, MA 02115.**

Harvard University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates.

CHAIRMAN, DEPARTMENT OF PATHOLOGY. Indiana University seeks candidates for the tenure-track position of professor and chairman. Must be Board-certified pathologist, experienced in medical education, research, and administration. Send curriculum vitae and references to: **Richard L. Schreiner, M.D., Chairman, Search and Screen Committee, Indiana University School of Medicine, Fesler Hall 302, 1120 South Drive, Indianapolis, IN 46202-5114.** *Affirmative Action/Equal Opportunity Employer, M/F.*

CHAIR SEARCH CONTINUES DEPARTMENT OF BOTANY ARIZONA STATE UNIVERSITY

The search has been extended for an outstanding scientist to provide departmental leadership and promote excellence in research and teaching at Arizona State University. The Department of Botany has strong research programs, vigorous undergraduate and graduate training, and productive, collaborative relationships with other departments and research centers. Research and teaching space will double by the end of 1992 to accommodate further expansion. Applicants must have a doctorate and be tenurable at the professor rank. Preferred areas of expertise are plant ecology/environmental biology, plant molecular/cellular biology, or plant physiology. Application deadline: 30 November 1990, or the 30th day of each month thereafter until filled. Candidates should forward curriculum vitae, statement of academic and administrative philosophy, and the names, addresses, and telephone numbers of at least three references. A more complete position description is available upon request. Direct inquiries, nominations, and applications to: **T. H. Nash, Chair, Botany Chair Search Committee, Arizona State University, Tempe, AZ 85287-1601.** *Affirmative Action/Equal Opportunity Employer.*

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Research Scientists

If contributing to important Biochemical Research is what you have in mind, come to Schering-Plough Research.

Aggressive, goal-driven research gives Schering-Plough its competitive edge in the health care industry. If you're a broadly experienced Scientist who shares our goals, this is your opportunity to apply your innovative thinking to some of today's most significant pharmaceutical breakthroughs.

Post-Doctoral Scientist

To investigate the structure of cytokines, their receptors and related polypeptides employing heteronuclear NMR spectroscopy methods. You will present these findings at national meetings and in specialized journals. Requires a Ph.D. in Biochemistry or related discipline coupled with a background in protein chemistry, NMR spectroscopy and distance geometry methods. Experience in multi-dimensional analyses of isotopically labelled proteins and peptides would be ideal.

Principal Scientist

To lead a team of physical biochemists conducting structural research on recombinant cytokines and their receptors, and to apply these findings to the rational design of novel therapeutic agents. A Ph.D. in Biochemistry or related discipline is essential coupled with 5-8 years' relevant post-doctoral experience. A strong background in physical and analytical protein chemistry, a good understanding of 3-dimensional protein structure, and outstanding communication skills are also required. Experience with molecular modeling of proteins/polypeptides, as well as with technologies such as multi-dimensional NMR spectroscopy that can directly define the 3-dimensional structure of proteins would be a definite plus.

Senior Scientist

To design novel therapeutic agents through structural definition of cytokines and their receptors using physical-biochemical techniques. Requires a Ph.D. in Physical Biochemistry or related field together with 2-4 years' relevant post-doctoral experience. Special attention given to candidates with a background in characterization of protein structure and dynamics using heteronuclear NMR spectroscopy methods, or experience in structural analysis of oligosaccharides derived from proteins.

As a \$3.1 billion company, we can offer a competitive salary/benefits package, and an environment encouraging professional growth. For prompt consideration, please send resume indicating position desired, to: **Mr. G. Czuba, Dept. PT, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003.** We are an equal opportunity employer.

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Schering-Plough

**STAFF SCIENTIST—(Cell Biologist)****Position #052**

The growth of mammalian cells in culture often depends on poorly defined serum factors. The successful candidate will be asked to lead a research and development program to engineer cell lines to be less dependent on growth factors. Experience with oncogenes, transfection and the regulation of cell proliferation is desired. A doctoral degree and at least 4 yrs. of post-doctoral experience is required.

STAFF SCIENTIST—(Molecular Biologist)**Position #055**

Exciting position to lead a group responsible for developing new cloning and expression vectors. A doctoral degree and at least 3 yrs. postdoctoral experience with lambda and plasmid vectors, prokaryotic/eukaryotic expression, *in vitro* mutagenesis, and PCR is necessary. The candidate should have working knowledge of bacterial and phage genetics, transposition, origins of replication, site-specific recombination, and mammalian promoters/enhancers. Because of Stratagene's high standards of excellence in vector design, the successful candidate should demonstrate exceptional creativity and success in vector development.

STAFF SCIENTIST—(Cell Biologist/Biochemist)**Position #056**

Exciting position to lead a group responsible for developing and producing a cytokine/lymphokine product line. A doctoral degree and at least 3 years postdoctoral experience purifying proteins, preferably growth factors, is desired. Experience with expression and purification of recombinant proteins is also desired.

MARKETING REPRESENTATIVE**Position #044**

Excellent opportunity to work in an expanding marketing department producing technical sales literature. Applicants should have a strong background in molecular biology with proven technical writing skills and creative abilities. Knowledge of IBM compatible computers and Desktop publishing programs is helpful.

PRODUCT MANAGER**Position #045**

Immediate opening for a molecular biology product manager. This individual will be responsible for facilitating the process of moving newly developed products from the laboratory to the market-place and for developing marketing plans to continue to promote existing products. Responsibilities will also include, competitive market analysis, technical writing, training, and interfacing with the company and customers. Successful candidates will have strong understanding of the molecular biology market, sales or marketing experience and strong written and verbal communication skills.

Stratagene offers a productive working environment and an excellent salary and benefits package which includes a 401-(K) Retirement Savings Plan. Please direct all inquiries to:

Stratagene
Attn: Human Resources
Job # (listed above)
11099 N. Torrey Pines Rd.
La Jolla, CA 92037

Senior Research Biologist

Glaxo Group Research has a considerable, growing commitment and research effort aimed at the discovery and development of effective new medicines for the cure of the common cancers of Man. Our innovative approach has made us leaders in the prevention of emesis associated with cancer chemotherapy and one of the world's leading pharmaceutical research organisations.

Our Cell and Molecular Science Division is currently establishing two new research teams with the specific remit to explore new areas in the cell and molecular science of cancer. This is a major new initiative which involves investment and collaboration on an international basis. These groups will require the appointment of group leaders and the positions will provide an ideal career launch opportunity for the established scientist.

One of the teams will have a bias towards Cell Biology and will be concerned with the testing of novel chemical approaches and "cutting edge" tools, including antisense and triplex forming oligonucleotides, which will permit modification of genes and their activities. The other team will help us gain an understanding of the genetic and molecular changes which lead to the development of the common tumours in Man and thus provide novel molecular targets which will give therapeutic discrimination between normal and neoplastic tissue. Initially the work will involve

development of *in vitro* systems which can be translated to *in vivo* for the study of mutations in important genes and loss of suppressor control.

The successful applicants will have had considerable involvement in the application of Molecular Biology to Biochemistry or Cell Biology, proven by experience and publication record. They will be innovative practical scientists capable of defining a research programme of work and skilled in communicating their ideas. There will be considerable liaison between the research teams and other teams in the Company and Academia. The work of the two teams is complementary and so the precise make up of the teams and team leaders will be balanced to provide a strong research group. The team leaders will be responsible for the attainment of research goals and the supervision and motivation of their teams in a stimulating and challenging research environment.

The rewards packages are outstanding and include an impressive range of benefits and, where relevant, relocation assistance.

Please send or fax full cv or telephone for an application form to Cathy Woodbine, Personnel Department, Glaxo Group Research, Greenford Road, Greenford, Middlesex UB6 0HE, England.
Tel: (+44) 81 422 3434 ext. 2573. Fax (+44) 81 422 4205.

Closing date: 26th October 1990.

Glaxo Group Research

Abbott Laboratories, a Fortune 100 company, holds an undisputed leadership position in the development of diagnostic and pharmaceutical products. Our extensive technical resources create a superior environment for those who would like to make a significant personal and professional commitment. The following positions are available in our Corporate Molecular Biology Department:

SCIENTIST — Prokaryotic Expression

In this challenging position, the selected candidate will use and develop prokaryotic systems to produce eukaryotic viral proteins. An M.S. or Ph.D. in Molecular Biology or Genetics is required. Experience in recombinant DNA, *Streptomyces*, or gram positive bacteria is preferred. Job #41454.

MOLECULAR BIOLOGIST — Protein Engineering

The qualified individual will be involved in the design, construction and analysis of mutant enzymes of diagnostic/pharmaceutical importance by applying modern techniques in gene cloning, gene expression, mutagenesis, protein modeling, and protein purification/assays. The selected candidate will participate in collaborative work to determine protein structure by crystallography and NMR. A Ph.D. or equivalent in biology or chemistry is required along with laboratory experience in gene cloning and previous participation in protein structure-function or protein design projects. Job #93D.

ASSOCIATE SCIENTIST — DNA Sequencing

The selected candidate will perform DNA sequencing reactions, run gels, read and analyze nucleic acid sequences, and prepare DNA templates by molecular cloning. This individual will also participate in evaluation/implementation of new techniques and instrumentation. A B.S. or M.S. in biology or chemistry is required along with 1 or more years of laboratory experience in molecular biology. Experience in nucleic acid sequencing and sequence analysis software is a definite plus. Job #36061.

We offer competitive compensation and benefits including profit sharing and a stock retirement plan. We are located in an attractive suburban area approximately 30 miles north of Chicago. For consideration, please send your resume to: Ann Ribbens, Corporate Placement, Abbott Laboratories, One Abbott Park Road, Abbott Park, IL 60064. (To facilitate the handling of your resume, please indicate job number on your cover letter or resume). Abbott is an Affirmative Action Employer.

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Neurobiologists

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.

Neurochemists — Openings are available for skilled neurochemists to conduct *in vitro* and *in vivo* biochemical experiments. Experience with assays of neurotransmitter function, for example, measurement of release, uptake, receptor binding, second messenger signals 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.

Behavioral Pharmacologist — This is an opportunity for a behavioral pharmacologist to join the multidisciplinary neuroscience research group in its effort toward novel drug development for psychotherapeutic indications. In addition to the screening of novel compounds in existing models, extensive work with the development of novel behavioral models will be involved. Experience in the following is highly desirable: animal models of psychiatric illnesses, operant conditioning paradigms, computerized data collection and statistics.

Pfizer offers a stimulating scientific research environment with the opportunity to interact with scientists from several disciplines. In addition, Pfizer has a competitive compensation/benefits 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: Mr. Kym J. Goddu, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF IMMUNOLOGY AND MICROBIOLOGY THE MEDICAL COLLEGE OF GEORGIA

The Medical College of Georgia invites applications and nominations for the position of chairperson of a newly established Department of Immunology and Microbiology. The successful candidate must have a distinguished record of achievement in research and potential or demonstrated ability for dynamic leadership with a firm commitment to faculty development and to excellence in graduate and medical education. Preference will be given to candidates with expertise in and potential to develop a strong department focused on molecular aspects of immunology and/or virology. This new department is expected to become a center of research excellence which will interact with other clinical and basic science departments. Applications and nominations should be received by the search committee before 30 November 1990, and should include both curriculum vitae and a supporting letter of intent. *Provisions of the Georgia open-records act are applicable; vitae of applicants must be revealed upon request.* Please address all correspondence regarding this position to:

Margaret L. Kirby, Ph.D.
Immunology and Microbiology Search Committee
Department of Anatomy
Medical College of Georgia
Augusta, GA 30912-2000

An Affirmative Action/Equal Opportunity Employer. Females and minorities are encouraged to apply.

DIRECTORSHIP OF THE NEUROLOGY DEPARTMENT HOSPITAL FOR SPECIAL SURGERY

The Hospital for Special Surgery (HSS) and The Department of Neurology, Cornell University Medical College (CUMC), seek candidates for the directorship of the Cornell-affiliated Neurology Program at HSS.

Duties of the director will include:

- Development of clinical and/or basic research programs relevant to the HSS mission in rheumatic, orthopedic, and peripheral neuromuscular diseases.
- An active role in graduate and postgraduate neurology training programs at CUMC.
- Ensuring the delivery of high-quality neurologic care to HSS patients.

The director will hold a tenure-level or academic-track academic appointment at CUMC in the Department of Neurology and Neuroscience and, if appropriate, in the graduate field of neuroscience. The HSS neurology program is linked inseparably to those of the New York Hospital-Cornell Medical Center as well as to the Memorial Sloan-Kettering Cancer Center.

Please reply with a letter, curriculum vitae, and names of three references to:

Fred Plum, M.D.
Chairman, Department of Neurology
and Neuroscience
Cornell University Medical College
1300 York Avenue
New York, NY 10021

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

PRINCIPAL SCIENTIST

Assist the research director of the U.S. Environmental Protection Agency's long-term national ecological monitoring program. Duties include long-term strategic design and preparation of briefing materials. Candidates must have a Ph.D. or M.S. in environmental science plus 6 years of demonstrated experience in designing, implementing, and supervising research in aquatic ecosystems, preferably in a multimillion-dollar monitoring and research program. Requires an accomplished publication and presentation record, excellent interpersonal skills, self motivation, and willingness to work extended hours and travel approximately 1 week per month. Respond with a cover letter that relates your experience to this position, résumé, unofficial transcripts, and the names and telephone numbers of three references by 26 October 1990 to:

Susan Carey
NSI Technology Services Corp.
1600 S.W. Western Boulevard
Corvallis, OR 97333

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POSITIONS OPEN

DEAN MEDICAL SCHOOL THE UNIVERSITY OF MICHIGAN

The University of Michigan is seeking nominations and applications for the position of dean of the Medical School. The dean is the chief academic and administrative officer of the school. Nominees and applicants must hold a doctoral degree in biomedical sciences (M.D., Ph.D., or equivalent) and demonstrate scholarly distinction appropriate for a tenured appointment in the Medical School. Candidates should understand and support the mission of the school in its roles of education, research, patient care, and community service. Candidates also must possess administrative and management skills to lead a complex, multifaceted, professional medical school and to interface effectively with a large university-owned hospital and research-oriented university. Nominations and applications will be accepted and reviewed beginning immediately. Nominations and applications should be sent to: John F. Greden, M.D., Chair, Medical Dean Search Committee, The University of Michigan, 3071 Fleming Building, Ann Arbor, MI 48109-1340.



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DIRECTOR, DIABETES RESEARCH. We seek a scientist (Ph.D.) with established record of productivity in diabetes-related research to direct physiologic laboratory research in an expanding division of endocrinology. The Endocrine Division has an active clinical program in diabetes including a Diabetes Education Center and inpatient diabetes unit. Applicants should be capable of independent research and also able to collaborate with clinical scientists. Winthrop-University Hospital is a 548-bed teaching hospital of The Health Sciences Center, SUNY at Stony Brook, located on Long Island, just 35 minutes from New York City. Send curriculum vitae to: John F. Aloia, M.D., Department of Medicine, Winthrop-University Hospital, 259 First Street, Mineola, NY 11501.

ANATOMIST/ZOOLOGIST, tenure-track, beginning fall of 1991. Ph.D. in anatomy or zoology. Commitment to liberal undergraduate education with teaching responsibilities in general zoology, human anatomy, and a graduate course of choice. A competitive research program is expected. Submit résumé, statement of teaching and research interests, and names, addresses, and telephone numbers of three referees to: Head, Department of Biology, James Madison University, Harrisonburg, VA 22807 by 9 November 1990. *The University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN NEUROBIOLOGY UNIVERSITY OF CHICAGO

The Department of Pharmacological and Physiological Sciences invites applications for a tenure-track position. The applicant's research should complement existing strengths in sensory physiology, neuronal growth and development, synaptic transmission, or chemical neuroanatomy. Initial rank and salary negotiable. Send curriculum vitae, reprints of three publications, 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.*

BONUS CIRCULATION FOR YOUR CLASSIFIED AD

Our issue of 16 November 1990 will be distributed to scientists attending the meeting of the American Society for Cell Biology (ASCB) in San Diego, California, 9 to 13 December 1990. Deadline for submission of line classified ads: 1 November 1990.

SCIENCE Classified Advertising
Telephone: 202-326-6555
FAX: 202-682-0816

POSITIONS OPEN

DEPARTMENT OF BIOCHEMISTRY THE UNIVERSITY OF ARIZONA FACULTY POSITION IN X-RAY CRYSTALLOGRAPHY

Applications are invited for a tenure-track ASSISTANT PROFESSOR position in x-ray crystallography of macromolecular systems. This is part of an ongoing effort to develop an exceptionally strong program in structural biology and biophysics. We have recently added three NMR spectroscopists and an x-ray crystallographer to this program, and plan to fill additional positions in the next 1 to 2 years. Applicants will be expected to carry out a vigorous research program with ample opportunities for collaboration, as well as to contribute to our graduate and undergraduate teaching program. An excellent crystallographic facility is available, with funds in place for the purchase of additional equipment. Applicants should submit curriculum vitae, representative reprints, a short statement of research plans, and have at least three letters of reference sent to: Dr. William Montfort, Chairman, Search Committee, Department of Biochemistry, Biosciences West, The University of Arizona, Tucson, AZ 85721.

Review of applications will begin 1 December 1990, but the position will remain open until filled. *Women and minorities are urged to apply.*

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

FACULTY POSITION IN GASTROINTESTINAL RESEARCH: INVESTIGATOR IN THE BASIC OR CLINICAL SCIENCES

A faculty position is available for a basic or clinical investigator in the gastroenteric sciences in a large academic Department of Gastroenterology. Applicants should possess M.D. or Ph.D. degree and have evidence of an independent program of research with extramural, peer-reviewed funding. Those with clinical training in gastroenterology can develop within this large department flexible ways whereby these skills can be maintained and utilized. Faculty ranking is also flexible, commensurate with the successful applicant's experience and academic standing.

The field of study is not restricted. Current faculty have interests in basic and applied research in liver function and disease, pancreatic function and disease, gastrointestinal peptides, gastrointestinal motility, epidemiology of digestive diseases, and the functional bowel diseases. Outstanding support services are available, and the opportunities for collaborative research are excellent. Applicants would be expected to have, or to establish, credentials in the national arena of academic gastroenterology.

Please forward applications, including curriculum vitae, bibliography, a summary of research interests, and the names of three references, to:

Sidney F. Phillips, M.D.
Gastroenterology Unit
Mayo Clinic
Rochester, MN 55905

An Equal Opportunity/Affirmative Action Employer.

ECOLOGIST DUKE UNIVERSITY

Applications are invited for a FACULTY POSITION in ecology in the Department of Zoology of Duke University. The new appointment will begin in the fall of 1991. Screening of applicants will begin 1 November 1990. Applicants with high promise in research and teaching will be considered from any branch of ecology, but we are particularly interested in candidates who take an experimental approach to community, population, or evolutionary problems in field situations. We expect to fill the vacancy with a tenure-track assistant professor, but exceptional candidates at the tenured associate professor level will also be considered. In addition to a vigorous research program, duties will include an undergraduate course and a graduate course in the candidate's area of specialization. Interested applicants should send curriculum vitae, one-page descriptions of research and teaching goals, one research paper or manuscript, and the names, addresses, telephone, and FAX numbers of three references to: D. A. Livingstone, Department of Zoology, Duke University, Durham, NC 27706. *Duke University is an Equal Opportunity/ Affirmative Action Employer. Women and members of minority groups are strongly encouraged to apply.*

Scientist/ Inflammation Research

PARKE-DAVIS Pharmaceutical Research Division, Warner-Lambert Company, seeks an experienced scientist in the growing area of Inflammation Research.

The candidate will be involved in examining the pharmacological effects and biochemical mechanisms of action of novel anti-inflammatory compounds. The successful applicant should have a strong background in anti-inflammatory pharmacology and experience with "in vitro" cell culture and "in vivo" animal models. A good understanding of the mechanism of oxygen radical-induced cellular/tissue damage is desirable. A Ph.D. in pharmacology with a minimum of two years of post doctoral experience is required. Good verbal and written communication skills are necessary.

Interested individuals should send their CV and references to **Mr. Jack Moyer, PARKE-DAVIS Pharmaceutical Research Division, 2800 Plymouth Road, Ann Arbor, MI 48105. Refer to job #90342. "Smoke-Free Work Environment"**

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To work on the development of diagnostic kits for hormones, therapeutic drugs and infectious diseases. A PhD with 0-3 years experience is preferred. Disciplines sought are: Microbiology, Biochemistry, Immunology or Clinical Chemistry.

Successful candidates should be highly self-motivated and goal-oriented with strong oral and written communication skills.

We offer a competitive salary and benefit program in a professional, friendly environment. For confidential consideration, send resume and salary history to the Personnel Manager.

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RESEARCH EDITOR/ SCIENCE WRITER

Excellent Researcher/Writer needed to provide major scientific textual input and research expertise for major grant submissions, clinical research protocols, Endocrine manuscripts, articles, abstracts and other scientific reports.

This is a **Senior position in the Department of Pediatrics** which requires the capacity for independent thought and initiatives; the ability to handle multiple projects and meet deadlines; computer proficiency and educational background in the life sciences. Master's degree and experience in Endocrinology, Biology and/or Chemistry preferred.

Excellent benefits include immediate pension vesting, health, dental, 4 weeks vacation and tuition plan. Send resume with salary requirements to: **M.N. Brown, CORNELL UNIVERSITY MEDICAL COLLEGE, 445 East 69th Street, New York, New York 10021. EEO/AA/M/F/H/V.**

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MEDICAL
COLLEGE**



Collaborations Manager

At Genentech, our success in the biotechnology industry is a result of superb personnel combined with a state-of-the-art environment. Currently, we are seeking a Collaborations Manager.

You will contribute to the identification of new research opportunities by regular meetings with Genentech research staff, attending scientific meetings, reviewing the literature and networking throughout academic and governmental organizations. Additionally, you will prepare reports and recommendations of research opportunities for staff review.

To qualify, you must have a PhD or equivalent in biological sciences and at least 3 years' postdoctoral experience. Exceptional communication skills are essential. Experience in technology transfer and computer competence are preferred.

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

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MEDICAL ONCOLOGIST/ HEMATOLOGIST


Outstanding opportunity for a well-trained clinical investigator to join the NIH-, ACS-supported Human Immunology and Cancer Program in the Department of Medicine, University of Tennessee Medical Center at Knoxville (UTMC/K). Major responsibilities include active participation in patient care with research emphasis on monoclonal Ig-associated human diseases (multiple myeloma, lymphoma and related diseases) and especially amyloidosis.

The successful candidate will work in well-equipped, state-of-the-art basic and clinical research facilities including hybridoma/Mab, flow cytometry, protein and peptide chemistry, immunochemistry, molecular biology, and computer laboratories. Excellent patient care services include a special dysproteinemia clinic, clinical research nurse support and advanced imaging capabilities. BC/BE hematology/oncology and eligibility for state licensure required. Position requires a minimum of 3 to 5 years of postdoctoral clinical and research experience and ability to conduct innovative research involving molecular/cellular immunology.

Tenure-track position available immediately. Excellent compensation (including fringe benefits) and academic rank commensurate with education and experience. The Knoxville area offers the scientific resources of the University of Tennessee and the Oak Ridge National Laboratory; recreational opportunities provided by the surrounding Great Smoky and Cumberland Mountains and extensive TVA lake system; and cultural amenities including a symphony and chamber orchestra, a major fine arts museum, opera, and theatre. Letter of application, CV, and names and addresses of 3 reference sources should be sent to:

Alan Solomon, M.D.

Professor of Medicine and Head
Human Immunology and Cancer Program

 THE UNIVERSITY OF TENNESSEE
Medical Center at Knoxville
1924 Alcoa Highway, Knoxville, TN 37920
The University of Tennessee is an affirmative action,
Title IX/Section 504 employer.

LIFE SCIENCES CONSULTING Albany, NY

For over 30 years, Dunn Geoscience Corporation has provided comprehensive and thorough advice, guidance and quality technical assistance in addressing clients' environmental and geotechnical issues.

Under the direction of Paul E. Brubaker, Ph.D., we are aggressively expanding our Life Sciences practice. To support this effort, we are looking for the following professionals:

Manager, Toxicology & Risk Assessment

Developing/implementing human exposure/risk evaluation models, health-based risk assessments, toxicological profiles and materials relative to air pollution, air permitting and workplace standards; site-specific hazardous waste regulatory actions. Requires Ph.D. in Toxicology with at least 10 years related industrial or consulting experience. Thorough familiarity with appropriate regulations, D.A.B.T. preferred. Position will play a key role in the development and growth of our toxicology practice corporate wide.

Toxicologist - Risk Assessment Specialist

Exposure/risk assessment models; health-based risk assessments; coordination of various sampling efforts; remedial strategy recommendations; toxicological profiles. Requires BS/MS in Toxicology, Biology, Environmental Chemistry or associated discipline with 3-5 years related experience preferably in consulting. Must have familiarity with current "Superfund" risk assessment methodologies and guidance documents.

Air Modeling Specialist

Computer air dispersion modeling of flow and emissions based on property source samples; chemical component source analysis, flow rates, barometric/meteorological analysis and control technology; scientific models of anticipated dispersion predictions; source permitting/re-permitting. Requires BS/MS in Chemistry, Chemical/Environmental Engineering, Meteorology or associated discipline. Minimum 5 years related industrial, consulting or governmental agency experience. Thorough knowledge of appropriate regulations.

All these positions are extremely visible and provide significant opportunities to advance our Life Sciences practice. We offer extremely competitive salaries and excellent employee benefits programs. Qualified candidates should send their resumes including salary histories in confidence to: Mr. Terry H. Stevens, Director, Human Resources, Dunn Geoscience Corporation, Corporate Headquarters, 12 Metro Park Road, Albany, NY 12205.

An Equal Opportunity Employer.



**Dunn Geoscience
Corporation**

DEPARTMENT OF MICROBIOLOGY OKLAHOMA STATE UNIVERSITY

The newly re-organized Department of Microbiology at Oklahoma State University is rapidly expanding to offer programs in both microbiology and cellular biochemistry. To meet its teaching and research goals, the department anticipates filling two tenure-track positions initially.

The first position seeks a researcher in ENVIRONMENTAL MICROBIOLOGY. The successful candidate will be active in the application of molecular techniques in areas such as molecular responses to environmental stimuli/stressors, molecular basis of microbial community structure or trophic interactions, molecular evolution, or environmentally-controlled gene regulation.

The second position is in the area of PHOTOSYNTHESIS and may deal with topics such as structure/function of photosynthetic reaction centers, electron transport, energy coupling, transport, protein-membrane interactions, or genomic control of bioenergetics in procaryotic or eucaryotic photosynthetic systems.

These positions may be filled at either the ASSISTANT or ASSOCIATE PROFESSOR level with rank and salary commensurate with experience. The Ph.D. degree in microbiology, biochemistry, cell biology, or related fields is required; relevant post-doctoral experience is highly desired. The candidates will be expected to develop an independent externally-funded research program and to actively participate in the graduate programs. The candidates will also be expected to teach courses in their specialty as well as participate in the microbiology and cell biology curricula. Substantial start-up funds and newly-renovated space are available.

Applicants should send curriculum vitae, a description of research program, relevant pre-/reprints, and the names, addresses, and telephone numbers of three references by December 1, 1990 to:

Dr. H. James Harmon
Chair, Search Committee
Department of Microbiology
Oklahoma State University
Stillwater, OK 74078
Ph. (405) 744-9692

Equal Opportunity/Affirmative Action Employer.

CELL AND MOLECULAR BIOLOGISTS

The Department of Cell and Structural Biology at the University of Illinois, Urbana-Champaign, is continuing the expansion of its faculty. A position at the **ASSISTANT PROFESSOR** level is available for the 1991-1992 academic year. Applicants should hold the Ph.D. degree or equivalent, and show exceptional promise in research in the areas of cell, developmental, or neural biology. Responsibilities will include participation in teaching in these areas. Salary will be commensurate with experience.

Substantial start-up funds and laboratory facilities are available to initiate new faculty research programs, for which the UIUC offers exceptional and broad-based supporting resources. These resources include a Transgenic Animal Facility; the Center for Electron Microscopy; the Genetic Engineering Facility, providing oligonucleotide and peptide synthesis and automated protein sequencing; the Cell Science Laboratory, which contains hybridoma and flow cytometry facilities; a molecular graphics facility; subsidized shops and animal care facilities; and a superb university library system. The UIUC is a National Center for Supercomputing Applications, and is home to the Beckman Institute for Advanced Science and Technology, which combines research in the physical and biological sciences. Many other units within the Schools of Life Sciences and Chemical Sciences, and the Colleges of Medicine and Engineering offer opportunities for interactions in the cellular and molecular sciences.

Urbana-Champaign combines the residential advantages of a medium-sized city (population 120,000) with outstanding cultural amenities within the University, and its location in east-central Illinois gives easy access to the cities of Chicago and St. Louis.

Applicants are requested to send a curriculum vita, a summary of research interests, and three letters of reference to: **Dr. Byron Kemper, Search Committee Chairman, Department of Cell and Structural Biology, University of Illinois, 506 Morrill Hall, 505 South Goodwin Avenue, Urbana, Illinois 61801, Telephone: (217) 333-6118.**

In order to ensure full consideration, applications should be received by December 15, 1990. Interviews may be conducted before December 15, 1990, but all applications received by that date will receive full consideration and the final selection will not be made until after that date.

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

DIRECTOR OF BIOPOLYMER FACILITY

Roswell Park Cancer Institute is seeking a Director of the Biopolymer Facility with a Ph.D. in biochemistry, molecular biology, cell biology, or a related area with training and experience in analytical and protein chemistry. The laboratory director will be responsible for directing the operation of the Biopolymer Facility. The Institute is a NCI designated comprehensive cancer center and this core facility supports research for over 200 Roswell Park staff members in the biological and physical sciences. The principal services of the laboratory are oligonucleotide synthesis, peptide synthesis, protein sequencing, amino acid analysis and PCR. The Biopolymer Facility is well equipped with modern instrumentation and has assigned two full-time technicians. The director will have opportunities for interactive participation in research projects and in shaping the future growth of the facility. He/she is expected to develop an active research program. Send resume, and names and addresses of three references to:

Richard Swank, Ph.D.
Department of Molecular and Cellular Biology
Roswell Park Cancer Institute
Elm & Carlton Streets, Buffalo, NY 14263.



Roswell Park is an Affirmative Action Employer

Join Wyeth-Ayerst Laboratories, one of the world's largest pharmaceutical research and development groups. Now is your opportunity to become an integral member of our fast-paced, innovative team at our research facility in Princeton, NJ.

HEAD Immunology Subdivision

If you have energy, drive and commitment, you may be exactly who we're looking for to lead a team of 17 scientists in the challenging field of autoimmunity research. Specifically, you will be responsible for coordinating the research and drug discovery activities of Senior Scientists and staff in the area of immunosuppression and autoimmunity. Ideally, you will possess the scientific acumen and experience to capitalize and enhance therapeutic opportunities as well as to develop the next generation of immunosuppressive agents to rapamycin. Your background must include a doctoral level degree with a minimum of 7 years post doctoral immunological experience.

Wyeth-Ayerst offers an excellent compensation and benefits package plus opportunities for career advancement. Please forward your resume with salary requirements to: **WYETH-AYERST RESEARCH, Personnel Manager, CN 8000, Princeton, NJ 08543-8000.** An Equal Opportunity Employer, M/F/H/V.



INSTITUTE OF HUMAN GENETICS University of Minnesota

The Institute of Human Genetics at the University of Minnesota will be hiring faculty at the rank of Professor (tenured), or Associate Professor (tenured), or Assistant Professor (tenure-track) in the area of higher eukaryotic molecular genetics. Although all areas of eukaryotic molecular genetics will be considered, there is a particular interest in expanding developmental and cancer genetics. Candidates will be expected to develop a vigorous, independent research program that complements the research being conducted by other University faculty and leads to external funding; participate in teaching and advising; and interact with other members of the Institute in its development and programs.

Candidates at the Assistant Professor level will have a doctoral degree (M.D. or Ph.D.), at least 2 years of relevant postdoctoral experience, and demonstrated productivity in quality research accepted or published in peer-reviewed journals. Candidates at the Associate Professor level will have a doctoral degree, at least 5 years of professional experience beyond the degree, distinction in funded research and writing, and demonstrated effectiveness in teaching and advising. Candidates at the Professor level will have a doctoral degree, at least 8 years of professional experience beyond the degree, a national reputation in funded research and writing, and demonstrated effectiveness in teaching and advising. Salary and rank will be commensurate with education and experience, and tenure will be granted in the appropriate University department.

Please send a current curriculum vitae, a brief description of current and future research interests, and 3 letters of recommendation to:

Chair, Search Committee
University of Minnesota Medical School
Institute of Human Genetics
Box 206 UMHC
Harvard Street at East River Road
Minneapolis, MN 55455

The last date for receipt of applications is 06/30/91, with review, consideration, and selection beginning 12/31/90.

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

CLINICAL RESEARCH ASSOCIATE

Schering-Plough HealthCare Products is a \$670 million division of Schering-Plough Corporation and one of the top five healthcare products companies in the U.S. We are currently looking for a Clinical Research Associate based in our Memphis, Tennessee facility.

Responsibilities will include developing protocols; planning, placing and monitoring clinical studies; conducting literature reviews; preparing and presenting scientific and medical data on Schering-Plough HealthCare Products and concepts; and responding to medical inquiries.

Qualified candidates will possess a PhD in Pharmacology, Physiology or related discipline. Thorough knowledge of all phases of clinical studies, including protocol design, placement and monitoring of studies, statistical analysis and report preparation and presentation are required. Two to five years clinical research experience is required with OTC Pharmaceutical experience desired. Excellent verbal and written communication skills are a must.

We offer a competitive salary and an excellent benefits package. Please send your resume including salary history and requirements, in confidence to: **Schering-Plough HealthCare Products, Dept. AS1012, 3030 Jackson Ave., Memphis, TN 38151.** An Equal Opportunity Employer, M/F/H/V.



POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITION

West Virginia University invites applications for a tenure-track position in the Department of Biochemistry at the **ASSISTANT PROFESSOR** level with research interests in the regulation of intermediary metabolism. Applicants should have a doctoral degree in biochemistry or related discipline, postdoctoral experience, and demonstrated research productivity; the successful applicant will also teach general biochemistry to professional and graduate students. Applicants should submit curriculum vitae including complete bibliography, a brief statement of research interests, and the names and addresses of three persons who will provide letters of reference, if requested, to: **Dr. George H. Wirtz, Department of Biochemistry, West Virginia University Health Sciences Center, Morgantown, WV 26506.** Review of applicant will begin 1 November 1990 and will continue until the position is filled. *Equal Opportunity Employer.*

UNIVERSITY OF CALIFORNIA SAN DIEGO (UCSD)

Applications are invited for two in residence **FACULTY POSITIONS** in the Department of Ophthalmology. Candidates will be expected to develop strong research and teaching program in molecular, cell, neuro- or vascular biology. Will join multidisciplinary group of scientists at the UCSD School of Medicine investigating glaucoma, a leading cause of blindness. The department is opening a new Eye Institute with modern laboratory facilities. Please send curriculum vitae, statement of professional goals, and three references to: **University of California, San Diego, Dr. Robert N. Weinreb, Department of Ophthalmology, 0814, 9500 Gilman Drive, La Jolla, CA 92093.** UCSD is an *Equal Opportunity/Affirmative Action Employer.* Final filing date: 1 November 1990.

DEPARTMENT OF BIOCHEMISTRY THE UNIVERSITY OF ARIZONA FACULTY POSITION

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** position. Candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and should have demonstrated potential for the development of an independent academic research career. We are seeking an outstanding individual with research interests in any area of biochemistry, biophysics, or molecular biology. Applications should include curriculum vitae, a list of publications, and a summary of current research activities and future research plans. The applicant should arrange for at least three letters of reference to be forwarded. Review of applications will begin 1 December 1990, but the position will remain open until filled. *Women and minorities are urged to apply.* Please send applications or nominations to: **Louise M. Canfield, Chair, Search Committee, Department of Biochemistry, Biosciences West, The University of Arizona, Tucson, AZ 85721.**

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

FACULTY POSITIONS SECTION OF IMMUNOBIOLOGY YALE UNIVERSITY

The Section of Immunobiology seeks applicants for several faculty positions at the level of **ASSISTANT PROFESSOR.** Qualified applicants in all areas of mammalian gene expression, signal transduction, and lymphocyte cell biology are invited to apply. We are particularly interested in candidates in the areas of transcriptional regulation, transmembrane signal transduction, protein sorting, and antigen presentation using cell biological approaches. Candidates would be expected to develop an independent research program and to participate in departmental teaching. Candidates should submit curriculum vitae with a summary of present and future research interests, and request that three letters of recommendation be sent. Applications should be received at the address below no later than 20 December 1990.

**Dr. Richard Flavell, Chairman
Section of Immunobiology
Yale University School of Medicine
310 Cedar Street, 424 FMB
P.O. Box 3333
New Haven, CT 06510**

*An Equal Opportunity/Affirmative Action Employer.
Women and minority candidates are encouraged to apply.*

POSITIONS OPEN

NEW PROGRAM: STRUCTURAL BIOLOGY

Tenure-track positions will be available at all levels in a new interdisciplinary program in structural biology between the Departments of Biological Science and Chemistry. Areas of research interest for this search include, but are not limited to:

- bioactive peptides
- contractility/motility
- gene regulation
- membrane proteins
- signal transduction
- structural immunology
- protein-nucleic acid interactions
- biomolecular modeling
- NMR of biomolecules
- high resolution microscopy
- time-resolved spectroscopy
- protein engineering
- x-ray crystallography

The university has made a strong commitment to structural biology with active, well-supported graduate programs and extensive core facilities. The latter includes fully staffed facilities for analytical biochemistry, DNA and protein sequencing, oligonucleotide and peptide synthesis, electron microscopy, hybridoma production, laser and NMR spectroscopy, and molecular modeling. The program offers competitive set-up funds and salaries. Florida State University provides an excellent research environment including the Supercomputer Research Institute and the National High Magnetic Field Laboratory.

Send applications consisting of curriculum vitae, brief statement of research interests and plans, and three letters of recommendation to:

**Professor Theodore P. Williams
Institute of Molecular Biophysics
The Florida State University
Tallahassee, FL 32306-3015**

Review of applications will begin in mid-November and will continue until positions are filled.

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

HYDROGEOLOGIST/AQUEOUS GEOCHEMIST

Hobart and William Smith Colleges are expanding our Geoscience Department from three faculty to four. We seek someone to teach courses in hydrogeology and/or low-temperature aqueous geochemistry and introductory geology, participate in our general curriculum, and encourage undergraduate research. Initial 2-year appointment, renewable for 2 years. Position may be converted to tenure track. Applicants should have completed the Ph.D.

The colleges operate a well-equipped and recently renovated 65-foot research vessel and are planning major renovation and expansion of their science facility.

The colleges are an Equal Opportunity and Affirmative Action Employer and actively seek applications from women, minorities, and other underrepresented groups.

Applicants should send letter of application and curriculum vitae and have three letters of recommendation sent by 5 January 1991 to:

**William F. Ahrensbrak, Chairman
Geoscience Department
Hobart and William Smith Colleges
Geneva, NY 14456**

NEUROBIOLOGIST

A tenure-track **FACULTY POSITION** at any rank is available starting September 1991 for a neurobiologist with a vigorous research program who can interact with colleagues who use developmental, electrophysiological, and molecular approaches to neurobiology. The Biology Department at City College, City University of New York (CUNY), includes 34 faculty and 35 doctoral students. The candidate will join an NIH-sponsored research center in cell and molecular biology involving 25 faculty from several departments and will participate in teaching undergraduate and graduate courses. Interested candidates should send curriculum vitae, a research summary, and the names of three references to: **Josh Wallman, Chair, Neurobiology Search Committee, Department of Biology, City College, CUNY, New York, NY 10031.** Applications received by 1 December 1990 will be assured consideration. *Equal Opportunity Employer.*

POSITIONS OPEN

The School of Biology at Georgia Institute of Technology invites applications for junior or senior level positions. The school plans to add at least three tenure-track **FACULTY POSITIONS** as part of an expansion in biosciences. Successful applicants are expected to establish an active program of funded research, and be committed to teaching. Areas of research interest include molecular and/or quantitative approaches to evolution, development, genetics, or physiology. Curriculum vitae, research plans, and names and addresses of three references should be submitted by 15 December 1990 to: **Dr. Roger M. Wartell, School of Biology, Georgia Institute of Technology, Atlanta, GA 30332.** Georgia Tech is an *Equal Opportunity/Affirmative Action Employer.*

CANCER GENETICS FACULTY POSITIONS

Faculty positions are available in genetic and/or molecular epidemiology, molecular oncology, and genetics of human cancer. The basic, clinical, and population components of the Fox Chase Cancer Center are collaborating in the expansion of a program in cancer genetics, and invite applications from those with Ph.D. and/or M.D. degrees and appropriate postdoctoral experience. All positions are tenured or in tenure track. Please send curriculum vitae, three references, and a letter describing scientific interests to: **Dr. Alfred Knudson, Chairman, Molecular Oncology Search Committee, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** An *Equal Opportunity Employer.*

PLANT EVOLUTIONARY BIOLOGY INDIANA UNIVERSITY, BLOOMINGTON

The Department of Biology is searching for a new **FACULTY MEMBER** working in the general area of plant evolutionary biology. Candidates may employ any approach, from ecological to molecular, as long as their central focus is the study of evolutionary mechanisms at the organismal, population, or species level. The successful candidate will be expected to conduct a vigorous, independent research program and contribute to teaching. Applicants should have demonstrated ability as creative scientists. We invite applications at all levels, from assistant to full professor. Junior candidates should send curriculum vitae, brief description of research interests, and three letters of reference to: **Dr. Jeff Palmer, Plant Evolution Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405.** Senior candidates should send a letter of interest and curriculum vitae.

Applications received before 15 December 1990 will be assured of full consideration.

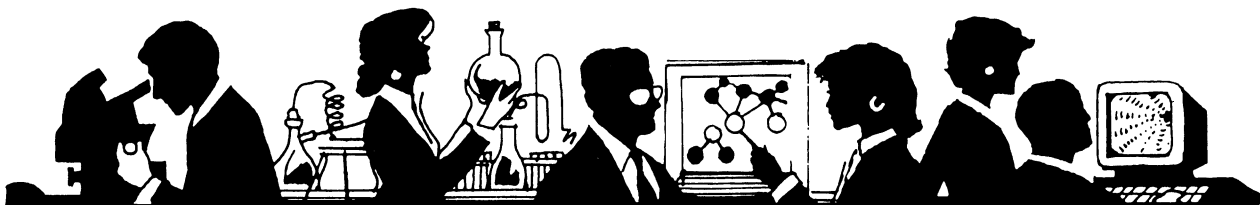
Indiana University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN ORGANIC CHEMISTRY. At Iowa State University. Applications are invited for this position which will become available with the fall semester, 1991. All research areas in organic chemistry, very broadly defined, will receive consideration. The appointment probably will be at the **ASSISTANT PROFESSOR** level; however, applications at all levels will be considered. Candidates with outstanding potential and commitment to excellence in both research and teaching are sought to join a faculty with a strong tradition of research in organic chemistry. There is a likelihood that the appointee will receive a substantial 3-year research fund in addition to normal set-up costs. Applicants should submit curriculum vitae, transcripts, a list of publications, and a detailed statement of research plans and teaching objectives to: **Professor W. S. Trahanovsky, Organic Search Committee Chair, Department of Chemistry, Iowa State University, Ames, IA 50011.** Junior applicants also should arrange for at least three letters of recommendation to be sent. *Women and minority applicants are encouraged to apply. Iowa State University is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF CALIFORNIA, IRVINE

The Student Recommended Faculty Program (SRFP) seeks a **LECTURER** for a 1-year appointment for the academic year 1991-92 to teach undergraduate courses in nutritional science and related substantive areas. Send curriculum vitae, three reference letters, teacher evaluations (if available), and course syllabi to: **Gina Lichacz, ASUCI-SRFP, University of California, Irvine, CA 92717.** *Equal Opportunity/Affirmative Action Employer.* Deadline: 15 December 1990.

For more than a century the employees of Burroughs Wellcome Co. have applied their talents to the discovery and development of important new medicines. Their abilities and initiative have brought our company preeminence in both the pharmaceutical industry and the scientific world...as our 1988 Nobel Prize winners give eloquent testimony.



GREAT PEOPLE MAKE A GREAT COMPANY

The Wellcome Research Laboratories has the following opportunities immediately available in the Division of Pharmacology.

Inflammation Research Pharmacologist

(Pos. #61197-4) To provide leadership and direction to a pharmacology laboratory involved in the use of *in vivo* and *in vitro* models for the purpose of discovering and developing novel therapeutic agents effective in inflammation and/or in blocking cell adhesion.

Candidates must have a Ph.D. in pharmacology, biochemistry, biochemical pharmacology, immunology or other related science plus two years of postdoctoral experience or two years of experience in inflammation research. Experience is needed in common laboratory techniques used in the inflammation research field (e.g. *in vivo* models of the pathophysiology of inflammation, *in vitro* biochemical methodology such as relevant binding assay, tissue culture, etc.). Publications demonstrating experience with "state-of-the-art" techniques and theory to do innovative research and drug development in the field of anti-inflammatory research are required. Other factors to be considered include: experience in arthritis, asthma, autoimmune, and/or other inflammatory diseases, *in vitro* models of inflammation, and analgesia.

Neuroscience Research Pharmacologist

(Pos. #62276-4) To conduct basic and applied research in experimental neurology with emphasis on developing animal models of neurodegenerative disorders, neural plasticity, and related cognitive functions.

Candidates must have an M.D. or a Ph.D. in pharmacology, physiology, or neurosciences plus two years of postdoctoral training or two years of research experience studying *in vivo* models of neurodegenerative disorders, neural plasticity, and related functions. Other factors to be considered include: publications that demonstrate expertise in models of focal ischemia; histology experience; and experience determining methods of assessing functional consequences of brain damage.

Respiratory Senior Associate Pharmacologist

(Pos. #62307-4) To initiate and conduct independent research directed towards the discovery and development of novel anti-asthmatic agents.

Candidates must have Ph.D. in a biological science. Other factors to be considered include: skills and experience in respiratory research (*in vivo* and/or *in vitro*), pharmacology, immunology, immunopharmacology and histology. Knowledge of and interest in pulmonary diseases. Experience with laboratory techniques for evaluating the role of cytokines and cell adhesion processes in allergy.

As a valued professional at Burroughs Wellcome Co. you will receive a salary commensurate with your experience and be supported by the highest level of benefits in our industry. If you are interested in working for us, submit your resume, indicating position number in your cover letter, by **November 26, 1990** to: **Burroughs Wellcome Co., Scientific Recruiting and Staffing, 3030 Cornwallis Road, Research Triangle Park, NC 27709.**

For information on other job opportunities with Burroughs Wellcome Co., call our Job Information Line at **(919)248-8347** in Research Triangle Park, NC or **(919)830-2997** in Greenville, NC.



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The Art of Discovery.

Syntex has discovered, developed and marketed a number of successful new products that testify to our commitment to basic and applied research. We continue to develop innovative new therapies for today's complex medical problems, and rely on research that combines the vision of a talented scientific team with state-of-the-art drug discovery and evaluation techniques. Toward this end, we devote 30% of our staff and 18% of our profits to R&D.

The following exciting career challenges await talented, energetic and motivated scientists at our headquarters and main research facility in the San Francisco Bay Area.

Neuropharmacologist

Establish and conduct behavioral models of neurological disorders. A PhD in Neuropharmacology, with an emphasis on behavioral pharmacology, 1-2 years of postdoctoral experience and familiarity with behavioral models of learning and memory, anxiety and psychosis are required.

Biochemical Pharmacologist

Provide expertise in radioligand binding technology, computation of data and receptor biochemistry. Experience in neurotransmitter release and other biochemical/functional assays in brain slices and cultured systems is preferred. A PhD in Neuroscience with 2 years of postdoctoral experience is required.

Biochemist/Neurobiologist

Operate in a multidisciplinary team environment where your main focus will be on the development, implementation and application of bioassays and immunoassays in support of the research and development of nerve growth factor and other neurotropic growth factors. The position requires a PhD in Biochemistry/Neurobiology with at least 1 year of postdoctoral experience in the use and development of bioassays/RIA/ELISA.

Electrophysiologist

Contribute to the study and discovery of novel CNS and peripherally acting drugs and play a key role in the elucidation of mechanisms of action of novel neurotransmitter receptors. The position requires a PhD in Physiology, Pharmacology or Neuroscience and at least 1 year of postdoctoral experience. A background in the use of *in vivo* and *in vitro* methods of recording drug action on neuronal activity would be an advantage.

Syntex will be a participant in the Society of Neuroscience meeting in St. Louis, and would welcome the opportunity to discuss career opportunities during the conference. We offer competitive compensation and relocation including an incentive bonus. For prompt consideration, please send your resume to: Syntex, Professional Staffing, Dept. KH/SC, 3401 Hillview Ave., Palo Alto, CA 94303. We are an equal opportunity employer.



Neuroscientist

The research department of Developmental Biology at Genentech, Inc. is seeking a Neuroscientist, at the level of Scientist, to join a group working on neurotrophic factors. This position is designed to contribute to research efforts toward developing novel molecules for the treatment of neurological diseases.

Interested candidates should have a Ph.D. in Neurobiology or Neuropharmacology and at least 3 years' postdoctoral training. Extensive experience with *in vivo* systems is required. Familiarity with animal models and paradigms of neurological diseases is preferred. Good oral and written communication skills are required as well as strong managerial skills.

Genentech, Inc. is located in South San Francisco and offers an excellent compensation and benefits package plus opportunities for career development. Please send resume with publications list and a list of references and salary history/requirements to: Yvonne Davino, Dept KN, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

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SCIENTIST

DRUG METABOLISM

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, is seeking a scientist with a background in Biochemistry to join our Drug Metabolism department.

The scientist will assist in the design and conduct of *in vitro* drug metabolism studies directed at understanding the involvement of cytochrome P450 and other drug metabolizing enzymes in the metabolism of novel therapeutic agents. The position requires a working knowledge of biochemical techniques used for *in vitro* metabolism studies, including enzyme assays, quantitative analysis of drugs and metabolites in biologic media using HPLC and radioisotopes. This position requires a B.S. or M.S. degree (or equivalent experience) in chemistry or a biological science plus 0-5 years of related work experience.

Based in our state-of-the-art facility in suburban Philadelphia near Valley Forge, PA, we provide a challenging, stimulating environment in which to grow and excel. We offer a competitive compensation/benefits package. For confidential consideration, please forward your resume to Helene McConnell, E160, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SB
SmithKline Beecham
Pharmaceuticals

MOLECULAR GENETICS FACULTY POSITIONS

The Department of Molecular Genetics of The Ohio State University is initiating a search to fill three tenure track positions. It is anticipated that one of these positions will be shared with the Ohio State Biotechnology Center. These positions may be filled at the **Assistant Professor** level or at more advanced levels. We are particularly interested in applicants with research interests in molecular genetic studies of major topics in molecular, cell, developmental biology, or neurobiology using experimental systems such as yeast, *Drosophila*, *Caenorhabditis*, *Mus*, and humans. However, highly qualified applicants with other research specialties within the broader mandate of our unit will also be considered seriously. A highly competitive recruiting package is available, including an attractive (hard money) salary, generous laboratory space, substantial funds for equipment purchase and funds for initial operating expenses, independent of extramural grant support. The Department and The Ohio State University are in the process of a major expansion in Molecular Biology and Biotechnology, and a substantial number of additional positions are anticipated in the future. Women and members of minority groups are enthusiastically encouraged to apply.

The Ohio State University is the flagship institution of the state's higher education system. It is located in the state capital, Columbus, which is a growing, yet highly affordable, metropolitan area of about 1.3 million people. Columbus has been ranked by *Newsweek* as one of the country's best places to live and work.

Applications should include a detailed curriculum vitae, a description of research experience, a statement of the nature of the planned independent research program, and the name, address and telephone number of each of four scientists who have agreed to serve as references. Applications will be accepted until suitable candidates are hired but recruiting is scheduled to begin in earnest by November 1990. Information about our Department can be obtained by calling our offices at 614-292-8084.

**THE
OHIO
STATE
UNIVERSITY**

Application materials should be sent to: **Dr. Alan M. Lambowitz, Molecular Genetics Search, Department of Molecular Genetics, The Ohio State University, 484 W. 12th Avenue, Columbus, Ohio 43210.**

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.



CAREER OPPORTUNITIES IN PLANT MOLECULAR GENETICS

DEKALB Plant Genetics, a leading agricultural seed company, is expanding its research program in maize biotechnology. We seek innovative plant molecular biologists at Ph.D., M.S. and B.S. levels to join our multidisciplinary team at the forefront of gene mapping in maize. This research team is identifying quantitative trait loci in maize using restriction fragment length polymorphisms and applying this information to our maize breeding research programs.

We seek creative and motivated scientists to join the existing program and take the lead in developing alternative methods for gene mapping. The successful candidates will work in a team oriented atmosphere and will interact with gene tagging, trait identification and genetic transformation programs.

In addition to a stimulating scientific environment, we offer excellent salary and benefit packages and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resume and the names, addresses and phone numbers of three professional references to: Ms. Dianne Dellarco, DEKALB Plant Genetics, Eastern Point Road, Groton, CT 06340.

An equal opportunity employer

At Becton Dickinson, World Health Is A Lifetime Occupation.

For generations, we've been helping the world face some of its toughest medical challenges. And that's created some of the most challenging careers for scientists anywhere. We're Becton Dickinson, and in our Research Center, we're involved in scientific exploration and experimentation in its purest form. The knowledge we gain paves the way for the development of innovative diagnostic and surgical technology, to produce the kind of equipment and supplies that change lives—and there's no more worthwhile way to make your livelihood.

Prenatal Genetic Disease Diagnosis Self-Directed Work Team

These positions will be part of a new project in Genetic Disease Diagnosis.

Scientist

You will be responsible for design, synthesis and purification of standard and novel labeling reagents for in situ nucleic acid probe assays, including developing methods for and participating in the evaluation of these reagents for use in assays. Ph.D. in Organic Chemistry, Biochemistry or Nucleic Acid Chemistry and 2 years' postdoctoral experience in the use of nucleic acid probes is required. Detailed knowledge of chemistry of nucleic acids is also necessary, as well as a working knowledge of hybridization and fluorescence detection systems.

Research Associate

This position will be responsible for designing and performing experiments using nucleic acid hybridization for trisomy detection, including preparing materials such as labeled oligonucleotides and DNA from chromosome libraries, for use in specific hybridization detection and developing rapid and simple hybridization conditions and specimen preparation for specific DNA detection. M.S./B.S. in Biology or Chemistry is required as well as 1-4 years' experience in immunoassay/ DNA hybridization assay development or molecular biology. Experience in a cytogenetics lab with classical karyotyping preferred.

Research Assistant

This position is responsible for the development and standardization of in situ hybridization assays for chromosome specific probes. Emphasis on experimental protocol development with the ability to implement such protocols is necessary. B.S. in Biology, Chemistry or Medical Technology is required, as well as 2 years' experience in immunoassay systems, biochemistry, molecular biology or genetics test design. Experience in a cytogenetics lab with classical karyotyping is preferred.

At Becton Dickinson, you'll earn a generous salary and benefits package, while contributing to the future of world health. Please send your resume to: **Becton Dickinson & Company Research Center, 21 Davis Drive, Research Triangle Park, NC 27709. AA/EEO Employer.**

**BECTON
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POSITIONS OPEN

FACULTY POSITIONS IN BIOLOGICAL SCIENCES COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

The Department of Biological Sciences of Columbia University invites applications for two faculty positions at the **ASSISTANT PROFESSOR** level. Outstanding applicants in the general areas of developmental, cellular, or molecular biology or biochemistry will be considered. Applicants should have a Ph.D. and have completed postdoctoral training. The successful applicant will be expected to initiate or continue an extramurally funded research program and be committed to teaching undergraduates as well as supervising graduate and postdoctoral fellows. A letter of application, curriculum vitae, description of current and future research, and three letters of recommendation should be sent to: **Dr. James Manley or Dr. Darcy Kelley, Faculty Search Committee, Department of Biological Sciences, 600 Sherman Fairchild Center, Columbia University, New York, NY 10027.**

Columbia University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION, ORGANIC CHEMISTRY. Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning fall 1991 in the Department of Chemistry at Connecticut College. The department offers an ACS-certified major in chemistry and also awards the B.A. degree in biochemistry. Excellent teaching and research equipment is available, including high-field NMR. The primary teaching responsibilities include organic chemistry lecture and laboratory. The successful candidate will be expected to develop an active research program in which undergraduates can participate. Applicants must have a Ph.D. degree. Postdoctoral experience is preferred, but not required. Connecticut College is a selective, coeducational, private liberal arts college in New London, Connecticut. Faculty normally teach five courses a year. Laboratory sections are equivalent to courses. Untenured faculty on full-time appointments receive funding for a summer of research and other forms of research support. Tenured faculty receive 80% of salary during a sabbatical year. *Connecticut College is an Affirmative Action/Equal Opportunity Educator and Employer and encourages applications from minorities and women.* Interested individuals should send curriculum vitae, graduate transcripts, brief statement of research plans, and three letters of recommendation by 26 November 1990 to: **Professor Bruce R. Branchini, Connecticut College, Department of Chemistry, New London, CT 06320.**

ACADEMIC NEUROLOGIST

The Hospital for Special Surgery and the Department of Neurology and Neuroscience, Cornell University Medical College, seek an academic neurologist with expertise in clinical electrophysiology for a tenure-track position in the Department of Neurology and Neuroscience of Cornell University Medical College.

The candidate's clinical responsibilities will include electromyographic and related studies at the Hospital for Special Surgery (HSS) and the New York Hospital (NYH). The candidate will be involved in the teaching of medical students, residents, and fellows and will be expected to initiate and develop a program of clinical and basic research appropriate to the unique clinical resources of HSS.

Please reply with a letter, curriculum vitae, and names of three references to:

Fred Plum, M.D.
Chairman, Department of Neurology
and Neuroscience
Cornell University Medical College
1300 York Avenue
New York, NY 10021

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

NEUROSCIENTISTS

Two neuroscientist (neurochemistry and neuroimmunology) positions are available to join a team studying encapsulated cell transplants for Parkinson's and other neurodegenerative disorders. Excellent salary, benefits, workplace. Brown University area. Send curriculum vitae and three references to: **Dr. Paul R. Sanberg, Cellular Transplants, Inc., 4 Richmond Square, Providence RI 02906. FAX: 401-272-3485.** No calls, please.

POSITIONS OPEN

FACULTY POSITIONS IN MOLECULAR BIOLOGY AND MOLECULAR PHARMACOLOGY

The Department of Pharmacology and Molecular Biology at The Chicago Medical School is initiating the third phase of faculty recruitment for tenure-track positions at all levels. Preference will be given to applicants with research interests in eukaryotic and/or viral gene expression, molecular mechanism of action of hormones and growth factors, molecular aspects of development, and cancer. The school relocated to a new modern facility adjacent to the very pleasant North Shore community of Lake Bluff, 38 miles from downtown Chicago and yet easily accessible by car or train. The department is now in an exciting stage of growth and development and has already recruited faculty of high calibre. Excellent core facilities are available. Strong M.D./Ph.D. program with substantial financial support. Salary and other benefits highly competitive. Please send curriculum vitae, research plans, and three references to: **Dr. Samson T. Jacob, Chairman, Department of Pharmacology and Molecular Biology, The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.** *Chicago Medical School is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGIST. Specializing in the ecological aspects of global change. We seek an ecologist, preferably whose major interest is in global change. Rank of the position is open and salary will be commensurate with experience and qualifications. We welcome applicants with any organismal specialty, empirical or theoretical approaches, and marine, freshwater, or terrestrial research programs. In addition to the research activities in the Department of Ecology and Evolution, the State University of New York (SUNY) at Stony Brook has related research programs in the Institute for Atmospheric Sciences, the anthropology program, and the Marine Science Research Center. Teaching will involve an undergraduate course in global ecology and a graduate course in the candidate's specialty. Please submit curriculum vitae, a short statement of research and teaching interests, and three letters of recommendations. Reprints should not be submitted with the initial application. All application materials should be received by 1 December 1990 and be addressed to: **Dr. Barbara L. Bentley, Chairperson, Ecology Search Committee, Department of Ecology and Evolution, SUNY Stony Brook, Stony Brook, NY 11794-5245.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK 165.*

POSTDOCTORAL POSITION BROWN UNIVERSITY

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

STANFORD UNIVERSITY POSTDOCTORAL POSITIONS IN CELL AND MOLECULAR BIOLOGY OF MEMBRANES

Postdoctoral positions are available immediately in an interdepartmental program at Stanford University. Applications are solicited from individuals with the Ph.D. or M.D. degrees with training in biochemistry or cell or molecular biology. Current research areas and principal investigators include: protein and lipid traffic between malaria parasites and host membranes (K. Haldar); molecular biology of membrane transport, membrane-cytoskeleton interaction (R. R. Kopito); protein sorting in regulated secretory cells, organelle biogenesis (A. W. Lowe); cell polarity, membrane-cytoskeleton interactions (W. J. Nelson); and enzymes of the ER, lipid trafficking, cholesterol metabolism (R. D. Simoni). Interested candidates should send a letter summarizing their research experience and interests, curriculum vitae, and the names and addresses of three references to: **Program in Cell and Molecular Biology of Membranes, Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020.**

An Equal Opportunity Employer.

CHAIRMAN

DEPARTMENT OF PATHOLOGY

Roswell Park Cancer Institute is seeking a Chairman for the Department of Pathology. This internationally-renowned comprehensive cancer center is recently entering a period of renewed growth and opportunity for research and academic activity is outstanding. Substantial academic credentials and an interest in research are highly desired. A faculty appointment will be at the School of Medicine and Biomedical Sciences, SUNY at Buffalo, according to the level of professional qualifications.



Curriculum vitae should be sent to:

Joseph Sweeney, M.D.
Chairman, Search Committee
Department of Laboratory Medicine
Roswell Park Cancer Institute
Elm and Carlton Streets
Buffalo, New York 14263

Roswell Park is an Equal Opportunity/Affirmative Action Employer.

CytoMed, Inc., an early stage development company committed to developing diagnostic and therapeutic agents for hematopoiesis research and clinical therapies is seeking dedicated investigators (Ph.D., M.S., B.S.) and product development scientists in the following disciplines.

CELL BIOLOGISTS

To investigate the growth, differentiation, and microenvironment of hematopoietic cells. A strong background in the hematopoietic system is required. Experience with novel cell culture systems, flow cytometry and immunology is highly desirable.

MOLECULAR BIOLOGISTS

To develop the expression systems for protein production.

ASSAY DEVELOPMENT SCIENTISTS

To develop innovative culture assays and immunoassays related to bone marrow cells. Experience with diagnostic product development is highly desirable.

CytoMed, Inc., located in a state-of-the-art facility within suburban Boston, offers competitive compensation, a comprehensive benefits package and an excellent work environment. Interested candidates should send resume to Human Resources, CytoMed, Inc., One Mountain Road, Framingham, MA 01701.

Equal Opportunity Employer

CytoMed, Inc.

STANFORD UNIVERSITY

COMBINED ADMISSIONS MODE IN BIOLOGICAL AND BIOMEDICAL SCIENCES

In addition to entering a given program directly, students may now opt to enter graduate study in the biological and biomedical sciences through the Combined Admissions Mode or CAM. This new program enables a small number of select students to begin graduate study at Stanford University without first committing to a given department or program. During the first year, following a series of "rotations" in different departments, CAM students select a thesis adviser and program in which to complete the Ph.D. The flexibility and breadth offered by CAM should appeal to those who view two or more departments or programs as equally attractive. Participating programs are:

DEPARTMENTAL:

Biochemistry
Biological Sciences
Cell Biology
Chemistry
Developmental Biology
Genetics
Microbiology and Immunology
Pharmacology
Molecular and Cellular Physiology

INTERDEPARTMENTAL:

Biophysics
Cancer Biology
Immunology
Medical Information Sciences
Neurosciences

More information and application forms for CAM can be obtained from: **Office of Graduate Admissions, Building 590, Room 208, Stanford University, Stanford, CA 94305-3052.** Deadline for receipt of completed applications is Dec. 15, 1990.

Stanford University is committed to the principles of Affirmative Action and welcomes applications from students of either sex and any race, color, religion, sexual orientation or national and ethnic origin.

Postdoctoral Opportunities

Lederle-Praxis Biologicals, a business unit of American Cyanamid Co., is recognized internationally as a leader in the research, development and manufacture of vaccines for the prevention of viral and bacterial disease. Currently, the Department of Viral Vaccine Research and Development is seeking an energetic and talented individual to work as an integral member of a multi-faceted scientific team.

Projects will involve analysis of host immune responses to viral antigens, both in vitro and in vivo. Studies will primarily focus upon the identification and characterization of cellular and humoral correlates of vaccine-mediated protection. There will also be extensive interaction with our protein chemistry, molecular biology and cell biology groups in the context of the development and immunological evaluation of recombinant and natural viral vaccine candidates.

The individual we seek will be a recent graduate of a Ph.D. degree program in Immunology. Hands-on experience in cellular immunology, virology and cell culture is desirable.

We offer an excellent salary and benefits package, including a 401K savings plan, and a convenient Rockland County location 25 miles north of New York City. If you're ready to make a contribution to a challenging program, send your resume to: Dan Nemecek, Professional Employment Representative, Lederle Laboratories, Pearl River, NY 10965. We are an equal opportunity employer.



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UNIQUE CAREER CHANGE OPPORTUNITY

Ph.D.s & Doctoral Professionals

The College of Osteopathic Medicine and Surgery in Des Moines, Iowa, offers an accelerated three-year program leading to the Doctor of Osteopathy (D.O.) degree. Doctors of Osteopathy are fully licensed physicians who practice all aspects of medicine in every state.

Your doctoral degree in biological sciences or natural sciences qualifies you to be considered for admission to this accelerated program.

The Graduate Professional Education Program (GPEP) features:

- Three years of didactic and clinical training.
- Significant reduction in total tuition and living costs compared to standard four-year medical programs.
- Financial assistance to qualified students.
- Self-paced learning through independent study.

For more information and an application contact:

Admissions Office — GPEP Program
**University of Osteopathic Medicine
and Health Sciences**
3200 Grand Avenue
Des Moines, IA 50312
(515) 271-1452

Commitment Leads To Discoveries...

Baxter Healthcare Corporation's Fenwal Division is committed for one simple reason. We know that the discoveries we make in our R&D Department today will save lives tomorrow. Our commitment has led to the expansion of both our Cellular Immunotherapy and Bone Marrow Transplantation Groups at our new Irvine, California Facility. We are looking for individuals at both the Ph.D. and technical level with several years relevant experience in the following areas of investigation:

Molecular Biology: Generation of recombinant antibodies reacting with a wide variety of products including T cell antigens identified by molecular cloning.

Molecular Biology: Application of PCR technology to the analysis of T cell subsets associated with certain autoimmune and neoplastic disorders.

Cellular Immunology: Functional characterization of T cell subsets as assessed by antigen specificity, expression of specific T cell markers, and lymphokine secretion.

Tumor Biology: Development of animal models to assess efficacy of adoptive transfer of T cell subsets for therapy of neoplastic diseases.

Hematopoiesis: Analysis of human stem cell differentiation antigens and assessment of stem cell function to aid in development of new stem cell isolation products.

We offer an excellent salary and benefits package, as well as the opportunity to grow with a leader. To apply, send a resume to: **Baxter Healthcare Corporation, Fenwal Division, Attn: Human Resources, 2807 Catherine Way, Santa Ana, CA 92705.** An Equal Opportunity Employer M/F/H/V.

Fenwal Division

Baxter

POSITIONS OPEN

POSTDOCTORAL POSITIONS. Available to study basic glioma immunobiology in the Division of Neurology, Harvard Medical School. Previous experience in cellular immunology or molecular biology is desirable. Send résumé with bibliography and names of references to: **Dr. Lois Lampron, Center for Neurologic Diseases, Neurology-Thorn 12, Brigham and Women's Hospital, Boston, MA 02115.**

POSTDOCTORAL POSITION. Available for a biochemist to study polyphosphoinositides, their derived second messengers, and phospholipases and protein kinases in smooth muscle. Applicants should send curriculum vitae and names and addresses of three referees to: **Dr. Ata Abdel-Latif, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100. An Equal Opportunity/Affirmative Action Employer. Females and minorities are encouraged to apply.**

POSTDOCTORAL POSITION. Available immediately in ongoing study of structure/function relationships in prostaglandin biosynthetic enzymes. Some experience in protein chemistry is preferred. Please send curriculum vitae and names of three references to: **Dr. Richard Kulmacz, Division of Hematology/Oncology, Department of Internal Medicine, University of Texas Medical School, P.O. Box 20708, Room 5.016, Houston, TX 77225. The University of Texas Health Science Center at Houston is an Equal Opportunity Employer. Women and minorities are encouraged to apply.**

MOLECULAR BIOLOGY/GENE EXPRESSION POSTDOCTORAL POSITIONS

Two funded postdoctoral positions are available immediately to study gene regulation in mammals (*Mol. Cell. Biol.* 9, 1415; *EMBO J.* 9, 859; *Genes and Develop.* 4, 1427). Candidates should have a recent Ph.D. and a background in molecular biology. Please send résumé and names of three references to: **Dr. Robert Costa, Department of Biochemistry, M/C 536, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, IL 60612. Equal Opportunity/Affirmative Action Employer.**

BRAIN SLICE/VISION/CHANNELS

POSTDOCTORAL POSITION. Available to study synaptic transmission, active membrane properties, and calcium dynamics in cat lateral geniculate and rat hippocampal brain slices. Techniques include a variety of electrophysiological and pharmacological approaches, such as single electrode voltage clamp, patch clamping, confocal microscopy, 3D reconstruction, and calcium imaging. This work is a collaboration between **Paul Adams and Murray Sherman**, to either of whom applications with references should be sent at:

**Department of Neurobiology and Behavior
State University of New York at Stony Brook
Stony Brook, NY 11794-5230**

POSTDOCTORAL POSITION. For recent Ph.D. to study the molecular characterization of prohormone processing enzymes required for the biosynthesis of enkephalin and tachykinin peptide neurotransmitters. This project involves bacterial expression of prohormone cDNAs, in vitro mutagenesis for determination of proteolytic cleavage site specificity, and molecular cloning of processing enzyme(s). Experience in molecular biology is required. Send curriculum vitae and names of three references to: **Dr. Vivian Hook, Department of Biochemistry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20889.**

POSTDOCTORAL POSITION in molecular neurobiology to study the molecular mechanisms of synaptogenesis. Investigations focus on the function and regulation of proteins (the 43K protein, dystrophin, and the 58-kD dystrophin-associated protein) involved in postsynaptic membrane assembly and clustering of nicotinic acetylcholine receptors. Candidates should have experience in molecular biology and/or biochemistry. Send curriculum vitae and the names of three references to: **Dr. Stanley C. Froehner, Department of Biochemistry and Program in Molecular and Cellular Neurosciences, Dartmouth Medical School, Hanover, NH 03756. Telephone: 603-646-7624. Dartmouth is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN



Universität Heidelberg

POSTDOCTORAL POSITIONS CONTROL OF TRANSCRIPTION AND mRNA PROCESSING MECHANISM OF ORGANELLE ASSEMBLY

Positions available at the Zentrum für Molekulare Biologie, University of Heidelberg, to work on: (i) the control of transcription and RNA processing in trypanosomes, including analysis of promoter function in vitro and by DNA transfection and (ii) the mechanism of protein targeting to the glycosome, an unusual trypanosomal peroxisome-like microbody. Experience in molecular biology or cell biology required.

Please send curriculum vitae, publications list (refereed publications in internationally recognized journals only; no abstracts please), description of research experience, and names, addresses, and telephone and/or FAX numbers of three referees to: **Dr. C. Clayton, ZMBH, Im Neuenheimer Feld 282, D-6900 Heidelberg 1, Federal Republic of Germany. Telephone: 06221-566876. FAX: 06221-566809.**

POSTDOCTORAL POSITION. Available immediately to study novel mechanisms of gene expression, mRNA maturation and molecular pathogenesis of *Trypanosoma cruzi* or *Pneumocystis carinii*. Training in molecular genetics/biochemistry preferred. Send curriculum vitae and three letters of reference by 30 November 1990 to: **Dr. Gregory A. Buck, Department of Microbiology, Box 678, MCV Station, Medical College of Virginia, Richmond, VA 23298.**

POSTDOCTORAL POSITION. Available immediately to participate in research on molecular virology and immunology of HIV/SIV in vitro and in vivo studies using chimpanzees and macaques under the direction of **Dr. Jorg Eichberg**. A Ph.D. in microbiology/immunology with experience in the molecular and immunological aspects of human and nonhuman primate retroviruses is essential. Salary ranges from \$21,694 up, with consideration for prior relative postdoctoral experience. Send curriculum vitae and the names and phone numbers of three references by 15 November 1990 to: **Personnel Director (054), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147. Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITIONS are available to work on the molecular genetics of development of *C. elegans* and the molecular biology of mammalian development. Candidates should have a strong background in biochemistry or chemistry and specific interests in the role of gene expression during development including RNA processing.

Submit curriculum vitae to:

**David Hirsh, Chairman
Biochemistry and Molecular Biophysics
Columbia University
630 West 168th Street
New York, NY 10032**

Columbia University takes Affirmative Action to ensure Equal Opportunity.

POSTDOCTORAL POSITION MOLECULAR VIROLOGY

Available immediately within the molecular biology/virology group, Department of Animal Science, Michigan State University (MSU). Current basic research projects focus on regulation of avian herpesvirus gene expression, interactions of avian herpesviruses and avian leukosis virus, and development of avian herpesvirus recombination systems. Potential candidates should have demonstrated proficiency in molecular biology techniques. Preference will be given to candidates with experience in gene regulation studies and herpesvirus and/or retrovirus molecular biology. Send curriculum vitae and three letters of reference to: **Dr. Paul M. Coussens, 16 Anthony, Department of Animal Science, Michigan State University, East Lansing, MI 48824.**

MSU is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION. In molecular biology/larval ecology starting January 1991. Goals of 3-year program are to determine mechanisms of barnacle larvae settling response and chemosensory recognition of bacterial films. Research to be coordinated with undergraduate minority training program. Send curriculum vitae: **Dr. Elizabeth Wenner, Marine Resources Research Institute, P.O. Box 12559, Charleston, SC 29412. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS. Available only to citizens or permanent residents of the United States to work on structure, function, and regulation of K^+ , Na^+ , and Ca^{2+} channels, small and large G proteins, and protein kinases. We use molecular biology, recombinant proteins, patch clamp, and reconstitution. Send curriculum vitae to: **Dr. Arthur M. Brown, Chairman, Department of Molecular Physiology and Biophysics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS. Two positions to study mechanisms of signal transduction in single cells from smooth muscle, invertebrate retina or sympathetic ganglia. Studies will involve patch clamping, $[Ca^{2+}]_i$ monitoring, flash photolysis, enzymology, and receptor binding techniques. Send curriculum vitae and names of three references to: **Drs. Edwin C. Johnson and Mark A. Simmons, Marshall University School of Medicine, Department of Physiology, 1542 Spring Valley Drive, Huntington, WV 25755-9340. Marshall University is an Affirmative Action/Equal Opportunity Employer.**

GLYCOPROTEIN BIOCHEMIST/ MOLECULAR BIOLOGIST

A **POSTDOCTORAL POSITION** has been created in the Department of Immunopharmacology.

The selected candidate will study the role of oligosaccharide structures on the high affinity human IgE receptor. Emphasis will be focused upon characterizing the carbohydrate structures and their significance for expression, ligand binding, and signaling.

To qualify, applicants should possess a thorough knowledge of techniques in cell and molecular biology. A background in membrane glycoproteins and/or immunology is preferred.

Please send your curriculum vitae and three references to: **Mr. R. H. Stevenson, Roche Research Center, Hoffmann-La Roche, Inc., 340 Kingsland Street, Nutley, NJ 07110. We are an Equal Opportunity Employer.**

POSTDOCTORAL POSITION. A postdoctoral position, supported by the National Institute on Aging, is immediately available to join a multidisciplinary group in the study of the neurobiology of aging and Alzheimer's disease. Applicants should have a strong background in molecular biology, with particular emphasis on all aspects of RNA isolation and manipulation. Additional experience in library construction and/or protein purification is desirable. *U.S. citizens or permanent U.S. residents only.* Please send curriculum vitae and three letters of reference to: **Dr. Mark R. Martzen or Dr. Paul D. Coleman, University of Rochester, Department of Neurobiology and Anatomy, Box 603, 601 Elmwood Avenue, Rochester, NY 14642. Affirmative Action/Equal Opportunity Employer.**

UNIVERSITY OF TORONTO FACULTY OF MEDICINE AND McMASTER UNIVERSITY HEALTH SCIENCES

POSTDOCTORAL AND GRADUATE STUDENT POSITIONS

Available in human molecular genetics to study molecular etiology of human diseases and gene therapy. Experience in recombinant DNA and/or cell biology techniques would be desirable but not essential. Please send résumé and names of three references to: **Dr. A. M. Sun, Department of Physiology, Medical Sciences Building, University of Toronto, Toronto, Ontario, Canada M5S 1A8, or Dr. P. L. Chang, Department of Pediatrics, McMaster University, Hamilton, Ontario, Canada L8N 3Z5.**

The Samuel Roberts Noble Foundation POSITIONS IN PLANT MOLECULAR BIOLOGY/VIROLOGY

We are seeking applicants for the following positions in the Plant Biology Division:

STAFF SCIENTIST

(Equivalent to Assistant Professor) (Applied Molecular Biology Group). Applicants must have two or more years of postdoctoral training in molecular biology and experience in molecular virology. The successful applicant will spend the majority of time (~80%) on independently derived or driven plant virological research. A small percentage of time (~20%) will be directed toward attaining research goals within the applied group. Closing date for applications is December 1, 1990.

POSTDOCTORAL POSITIONS

(Molecular Plant Pathology and Plant Cell Biology Groups). One position is available immediately to work on signal transduction pathways involved in regulating the activity of 3-hydroxy-3-methylglutaryl coenzyme A reductase in potato. Preference will be given to candidates with experience in plant protein purification and molecular biology. Other positions will become available from November 1, 1990 through mid-1991 in the following areas: analysis of plant defense gene promoters for *cis*-elements and *trans*-factors conditioning tissue-specific and pathogen-induced expression; manipulation of defense genes in transgenic alfalfa; expression of metallothionein genes in transgenic plants. We are seeking highly motivated individuals with suitable experience in molecular biology and/or biochemistry.

RESEARCH TECHNICIAN

(Molecular Plant Pathology Group). Available November 1. To join a group studying regulation of plant defense gene transcription factors. Candidates should hold a degree in biochemistry, molecular biology or a related biological science.

To apply, submit curriculum vitae, statement of research interest and names of three referees to:

Dr. Richard S. Nelson (for Staff Scientist position) or Dr. Richard A. Dixon (for Postdoctoral, Technician), Plant Biology Division, The Samuel Roberts Noble Foundation, P.O. Box 2180, Ardmore, OK 73402. Phone 405-223-5810, FAX 405-221-7362.

RESEARCH OPPORTUNITIES

MedImmune, Inc. a dynamic biotechnology company in the Washington, DC area, is committed to the discovery and application of novel molecular and immunologic approaches toward the development of vaccines and therapeutic agents for infectious diseases. Our expanding activities have created several openings for individuals with Ph.D., M.S., and B.S. degrees to work in the following areas:

- * **Prokaryotic Molecular Biology**
- * **Protein Expression & Secretion in Bacteria**
- * **Cellular Immunology**
- * **Intracellular Bacteria / Host Cell Interaction**

Successful candidates will have substantial research experience with pathogenic bacteria or viruses and a demonstrable record of scientific productivity. MedImmune offers competitive salaries, an excellent benefits package and a unique opportunity for professional growth. Applicants should submit their resumé for prompt, confidential consideration to:



MedImmune, Inc.
formerly Molecular Vaccines

MedImmune, Inc.
Human Resources
19 Firstfield Road
Gaithersburg, MD 20878

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Research

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. . . of Kallestad Diagnostics, Inc., a subsidiary of Sanofi, Inc., a world leader in the production of comprehensive medical diagnostic systems for allergy, autoimmune, infectious disease and immunology. An exciting opportunity exists at our location in Minneapolis/St. Paul, headquarters of Sanofi Diagnostics, Western Zone.

We seek a scientist with 4 or more years of academic, clinical laboratory, or industrial experience, for one of our R & D teams. In this position, you will develop new products and enhance existing products through application of new technologies. Strong analytical, research and problem solving skills are essential. Demonstrated expertise in cellular immunology is a requisite. An advanced degree in Immunology, Microbiology or Molecular Biology is required.

The Minneapolis/St. Paul area is a center for the medical products industry and provides an outstanding quality of living. We offer an excellent salary, relocation and benefit package. For prompt, confidential consideration, please submit your resume in confidence to: **D. Baxter, KALLESTAD DIAGNOSTICS, INC., 1000 Lake Hazeltine Drive, Chaska, MN 55318. Equal Opportunity/Affirmative Action Employer.**

Kallestad
DIAGNOSTICS, INC.



PROTEIN RESEARCH SLOAN-KETTERING INSTITUTE

Applications are invited for several positions in the newly established Protein Center at Sloan-Kettering Institute:

- Postdoctoral Research Fellow (recent Ph.D.) or Senior Research Scientist (Ph.D. and 3 years experience) to develop chemistries, instrumentation and methods for sub-picomole isolation and sequencing of proteins. Candidates with background in MS are especially encouraged to apply.
- Ph.D. in biochemistry (or equivalent experience) to operate and improve automated protein sequencers, conduct research in micro-sample handling techniques and coordinate all research collaborations.
- Ph.D. in biology (or equivalent experience) as manager of a 2D-gel laboratory/database as part of a research program on vascular injury response.
- M.S. in chemistry/engineering (or equivalent experience) as instrumentation/computer manager and to operative and improve LC and MS systems.

The new laboratory will be dedicated exclusively to technology development and research. Background in the relevant fields is an absolute requirement for all positions. Salaries will be commensurate with experience. Candidates should send a curriculum vitae and references to:

Paul Tempst, Ph.D.
Molecular Biology Program,
Sloan-Kettering Institute
1275 York Avenue
New York, NY 10021

RESEARCH OPPORTUNITIES IN NEUROBIOLOGY

Amgen, a leader in the discovery and marketing of hematopoietic and tissue repair growth factors, has made a significant commitment to the development of protein therapeutics to treat neurological disorders. We have immediate openings at several career levels for scientists to participate in a multi-disciplinary research program to discover and develop novel neurotrophic factors using *IN VITRO* assays and *IN VIVO* models.

Successful candidates will have experience in one or more of the following: neuronal cell culture, neuropharmacology, neuroanatomy, lesion and disease paradigms and nervous system development. Additional expertise in immunologic techniques and molecular biology is desirable.

RESEARCH SCIENTIST POSITIONS.

Candidates should have a Ph.D. or equivalent in a relevant area and 1-3 years of postdoctoral experience. Additional experience as an independent scientist in academic or industry settings is desirable but not essential.

POST-DOCTORAL POSITIONS. A Ph.D. or equivalent in a relevant area of neurobiology is required.

RESEARCH ASSOCIATE POSITIONS. A Bachelor's degree or equivalent and relevant work experience in neurobiology, including neuronal cell culture or neurohistochemistry, are necessary.

Amgen offers a stimulating and challenging research environment on the leading edge of biotechnology. Our need for these positions reflects an ever increasing commitment to the development of significant products for human health care through excellence in research.

If you have the necessary skills and would like to be a part of an organization that places a high priority on its human resources, please send us a complete C.V. in confidence.

Amgen representatives will attend the upcoming Society of Neurosciences meeting. We will provide the opportunity for confidential interviews there. Please indicate if you plan to attend so that we may schedule interview dates and times with you in advance.

AMGEN, INC.
Recruitment, Dept. #557
Amgen Center
Thousand Oaks
CA 91320-1789

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This is an excellent opportunity for a thoroughly experienced scientist with a minimum of 10 years' post-doctoral work in pharmacokinetic evaluation/interpretation of analytical data. You must also have a solid background in conducting/supervising programs on the absorption, distribution, metabolism and excretion of radio-labelled drugs in laboratory animals and humans. Managerial expertise and strong oral/written communication skills are essential to your success.

We offer a competitive salary and all the benefits you could expect from an industry pacesetter. For prompt, confidential consideration, please forward your resume to: Mr. R. D. Blackburn, Schering-Plough Research, P.O. Box DS-90-13, 60 Orange Street, Bloomfield, NJ 07003. An equal opportunity employer.

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Schering-Plough

Bristol-Myers Squibb Pharmaceutical Research Institute

The Squibb Institute for Medical Research is continuing to expand our extensive research efforts in the areas of cardiovascular, infectious, oncologic and metabolic diseases.

GROUP LEADER Biochemist – Virology

The Virology Department has an opportunity for an enzymologist in its antiviral programs. The successful candidate should have experience with enzyme/inhibitor interactions, as indicated by an established record of accomplishment. In addition, he or she is expected to lead the research of several laboratories involved in evaluation of antiviral drugs in an established and productive program. This position is based in Princeton, NJ. **Reply to Dept. #158A.**

GROUP LEADER Molecular Virologist

The Virology Department is seeking a molecular virologist to lead research aimed at defining potential new antiviral targets. The successful candidate should have an established record of scientific accomplishment, preferably in studies of herpesvirus replication. In addition, the candidate should be confident in directing several laboratories in the areas of genome replication and replication of gene expression. This position is based in Princeton, NJ. **Reply to Dept. #158B.**

SECTION HEAD Toxicology

The Department of Toxicology, located in our New Brunswick, NJ campus, is seeking a Sr. Toxicologist to supervise toxicologic study groups and manage drug safety projects with particular emphasis on meeting international regulatory requirements, clinical research needs, and company development milestones. This position is also responsible for the preparation of summaries and other documents for regulatory submissions including Pharmacologic-Toxicologic Expert Reports and NDA Nonclinical Summaries. Candidates should possess a Ph.D. in Toxicology or a related discipline along with 5-7 years experience in the pharmaceutical industry. **Reply to Dept. #158C.**

Please forward your resume to (including dept. code#): **Bristol-Myers Squibb Pharmaceutical Research Institute, Human Resources Department, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



Bristol-Myers Squibb Company



CLOWING & ANALYSIS OF LARGE DNA MOLECULES

April 8 - 22, 1991

Bruce Birren, *California Institute of Technology*
Nancy Shepherd, *E. I. DuPont de Nemours & Co.*
Sue Klapholz, *Cell Genesys, Inc.*

This course will cover the theory and practice of manipulating and cloning high molecular weight DNA. Lectures and laboratory work will deal with the use of bacteriophage P1 and yeast artificial chromosome (YAC) cloning systems, the isolation and manipulation of high molecular weight DNA from mammalian cells for cloning (including the size-selection of >200 kb DNA fragments), and the analysis of high molecular weight DNA by pulse field gel (PFG) separation techniques. P1 and YAC recombinant DNA molecules will be produced, introduced into cells (*E. coli* and yeast, respectively), and reisolated after appropriate clone selection and colony screening procedures. A variety of size standards for pulsed-field gel electrophoresis will be prepared and gels will be run to compare the DNA separation capabilities of the common PFG techniques. Students will gain experience with physical mapping of YAC inserts and high molecular weight genomic DNA. Lectures by outside speakers on topics of current interest will supplement the laboratory work.

PROTEIN PURIFICATION AND CHARACTERIZATION

April 8 - 22, 1991

Daniel R. Marshak, *Cold Spring Harbor Laboratory*
Bruce W. Erickson, *University of North Carolina*
Jim Kadonaga, *University of California, San Diego*
John A. Smith, *Harvard Medical School*

This course is intended for scientists who are not familiar with techniques of protein isolation and characterization. Students will learn the major techniques in protein purification by actually performing four separate isolations including: (i) a regulatory protein from muscle tissue; (ii) a fusion protein from *E. coli*; (iii) a DNA binding protein from nuclei of tissue culture cells; and (iv) a chemically synthesized peptide. A variety of chromatographic, electrophoretic, and bulk fractionation techniques will be employed including: ion exchange, gel filtration, hydrophobic interaction, affinity-based adsorption, and immunoaffinity chromatography; polyacrylamide gel and two-dimensional gel electrophoresis and electroblotting; precipitation by salt and pH; and HPLC analysis. Methods of protein characterization will be discussed including amino acid analysis, protein sequencing, and mass spectrometry. Emphasis will be placed on methods of protein purification rather than automated instrumental analysis. Guest lecturers will discuss protein structure, modifications of proteins, and methodologies for protein purification. Applications of protein biochemistry to various areas of research in molecular biology will be discussed. Guest lecturers include: R. Aebersold, L. Gierasch, G. Hart, N. Pace, Y. Paterson, G. Rose, and K. Wilson.

Tuition, room and board.....\$1,475.

Application deadline: January 15, 1991

Application/information may be obtained from:

REGISTRAR

Cold Spring Harbor Laboratory
Cold Spring Harbor, New York 11724
Phone: 516-367-8343

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY

A position is available to study neural differentiation and the regulation of neurotransmitter metabolism in the nematode *C. elegans*. Projects emphasize the use of genetic, molecular, and immunocytochemical techniques. Those with prior experience in molecular biology, genetics, cell biology, and/or biochemistry are urged to apply.

Please send letter and curriculum vitae, or call (405) 271-7681.

James B. Rand, Ph.D.
Program in Molecular
and Cell Biology
Oklahoma Medical
Research Foundation
825 N.E. 13th Street
Oklahoma City, OK 73104



EOE/Affirmative Action Employer. OMRF encourages women and minorities to apply.

POSITIONS OPEN

NIH POSTDOCTORAL FELLOWSHIPS. Available to study cell aging and controls of cell proliferation/differentiation. Start dates prior to 1 January 1991 or after 1 May 1991. Send curriculum vitae and statement of research interests to: **Barbara Gilchrist, M.D., Department of Dermatology, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.**

POSTDOCTORAL FELLOW

Two-year fellowship available immediately to study the cell biology of vitreoretinal diseases (diabetic retinopathy and proliferative vitreoretinopathy). A strong background in cell biology is essential. Experience with monoclonal antibodies, retinal pigment epithelial, and endothelial cell culture is desirable. Send curriculum vitae, research interests, and three recommendation letters to: **John T. Thompson, M.D., Director, Retina Section, Yale University Department of Ophthalmology and Visual Science, 330 Cedar Street, New Haven, CT 06510.**

POSTDOCTORAL FELLOWSHIP

A postdoctoral position is immediately available to study the potential of novel embryonic stem cells to serve as a source of tissue for therapeutic transplantation and/or as a cellular delivery system for gene therapy. A successful candidate will have a Ph.D. degree in either molecular or developmental biology and solid experience in the methods and techniques of both mammalian developmental biology and molecular biology. Candidate should submit a statement of interest, curriculum vitae, and the names of three references to: **Dr. Thomas E. Wagner, Edison Center, Ohio University, Athens, OH 45701.** Minimum salary: \$25,000. *Affirmative Action/Equal Opportunity Employer.*

FELLOWSHIPS FOR POSTDOCTORAL TRAINING. In neural development, plasticity, and regeneration at The Ohio State University. Systems, cellular, and molecular approaches are available for trainees supported by an NINDS training grant. Faculty include K. Alley, M. Beattie, G. Bishop, J. Boulant, J. Bresnahan, R. Burry, H. Cooke, R. Ho, L. Horrocks, J. King, D. Lim, G. Martin, N. Neff, R. Nordlander, R. Rogers, A. Rotter, B. Stokes, R. Tassava, S. Tjioe, J. Wood, and A. Yates. *Fellows supported by the training grant must be U.S. citizens or permanent residents; however, other positions may be available which can be supported by funds available to individual investigators.*

Applications, including curriculum vitae, statement of research interests, and three letters of recommendation, should be sent to: **Drs. G. F. Martin and M. S. Beattie, Department of Cell Biology, Neurobiology and Anatomy, The Ohio State University, 333 West 10th Avenue, Columbus, OH 43210.** Potential applicants are encouraged to contact the program directors and prospective faculty sponsors for detailed information. **Telephones: Dr. Martin, 614-292-1667; Dr. Beattie, 614-292-1781.**

GRADUATE AND POSTDOCTORAL FELLOWSHIPS EVOLUTIONARY MECHANISMS

Six core faculty (V. Chandler, L. Heisler, R. Lande, M. Lynch, E. Selker, and F. Stahl) in the Department of Biology, University of Oregon, are administering a 5-year NSF training grant for studies on genetic mechanisms of evolution. We are seeking highly qualified postdoctoral candidates for **RESEARCH ASSOCIATE** positions, and graduate student candidates for **GRADUATE RESEARCH FELLOW** positions. A sincere commitment to understanding of both molecular genetics and evolution at the phenotypic level is an essential requirement for appointment. The initial deadline for 2-year postdoctoral appointments is 25 November 1990; thereafter, applications will be reviewed about every six months. Applicants should submit a brief summary of interests, curriculum vitae, and names, addresses, and telephone numbers of three references. *We are especially interested in minority recruitment.* Further information can be obtained from any of the faculty. Send applications to: **Evolutionary Mechanisms Training Group, Department of Biology, University of Oregon, Eugene, OR 97403.** *The University of Oregon is an Equal Opportunity/Affirmative Action Institution, committed to cultural diversity.*

POSITIONS OPEN

POSTDOCTORAL FELLOW MOLECULAR PATHOBIOLOGY

The Department of Pathology, University of Maryland, has two positions available to participate in projects involving the study of cellular and molecular aspects of toxic cell injury with particular emphasis on measurement and imaging of intracellular ions, altered gene expression and regulation, and mechanisms of cell death. One project involves reactions of renal tubular epithelium to oxidative stress, ischemia, and related injuries; the other involves mechanisms of action of cancer chemotherapeutic agents in bronchial epithelium and tumor cell lines.

The ideal candidate has a Ph.D., M.D., D.V.M., or D.D.S. with strong background in molecular biology, tissue culture, and/or cellular ion regulation and imaging using fluorescent probes.

Competitive salary and benefits including health care package.

Please send curriculum vitae including statement of research experience and names of three references to: **Benjamin F. Trump, M.D., Chairman, Department of Pathology, University of Maryland, Room 7-34, 10 South Pine Streets, Baltimore, MD 21201.** *An Equal Opportunity/Affirmative Action Employer.*



UNIVERSITY OF MARYLAND
AT BALTIMORE
CAMPUS FOR THE
PROFESSIONS

POSTDOCTORAL RESEARCH ASSOCIATE IN DEVELOPMENTAL NEUROBIOLOGY. Available immediately to participate in a study of the role of synaptic activity in cerebellar development in wild type and mutant mice after chronic in vivo exposure to neurotransmitter antagonists. Send curriculum vitae, brief statement of research interests, and names of three references to: **Dr. Michael W. Vogel, University of Maryland School of Medicine, Maryland Psychiatric Research Center, P.O. Box 21247, Baltimore, MD 21228.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Opportunity to study the molecular basis of asbestos carcinogenesis. Experience in cell culture and/or molecular biology techniques required. Please send curriculum vitae, three letters of recommendation, and summary of career goals to: **Agnes B. Kane, M.D., Ph.D., Department of Pathology and Laboratory Medicine, Brown University, Providence, RI 02912.** *Brown University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. Positions available for recent Ph.D.'s to study the mutation, function, and regulation of thymidylate synthase in human cancer cells, and to determine events that influence programmed cell death. Techniques include molecular biology, gene sequencing, protein purification, enzyme kinetics, HPLC, and cell culture. A strong background in molecular biology, biochemistry, or molecular pharmacology is required. Send curriculum vitae and three letters of reference to: **Dr. J. A. Houghton, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION RESEARCH ASSOCIATE

Position available for individual with experience and training in molecular biology/microbiology with Ph.D. or M.D. Experience or training in DNA sequencing and plasmid preparation is desirable. Qualified applicants should send curriculum vitae, a statement of research interests, copies of relevant publications, and the names of three references to: **Dr. Kenneth W. Minton, Department of Pathology, Uniformed Services University of the Health Sciences, Bethesda, MD 20889-4799** or Telephone: 202-295-3476. *U.S. citizenship or residency is required. An Equal Opportunity/Affirmative Action Employer.*



PRE-DOCTORAL POSITIONS M. I. T.

**Molecular, Chemical, & Genetic Analysis of
the Chemical-Biologic Interactions Related
to Cancer & Genetic Disease**

Whitaker College of Health Sciences
and Technology
Graduate Program in Toxicology

Faculty	Area of Interest
John M. Essigmann	DNA Repair and mutagenesis
James G. Fox	Gastrointestinal microflora & endogenous carcinogens
Steven R. Tannenbaum	Chemistry of macromolecular adducts; nitric oxide
William G. Thilly	Mutational spectra; mechanisms & genetic epidemiology
Gerald N. Wogan	DNA adducts & genetic change in carcinogenesis
Helmut Zarbl	Transformation effector & suppressor genes, oncogenes; gene expression

Full support (stipend and tuition) is offered to all accepted candidates. For program information and an application, CONTACT: Debra A. Luchanin, Academic Administrator, Division of Toxicology, Room 16-330, M.I.T., Cambridge, MA 02139, (617) 253-5804.

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(213)413-3800 fax (213)483-5438

Research Scientist Microscopist

Kraft General Foods, a world leader in the food industry is currently seeking a Research Scientist with selected skills in the area of microscopy to work in our Basic Science Division.

The selected individual will join a Microstructure Group studying the structure/function relationships inherent in diverse food systems which include proteins, carbohydrates and lipids. A team approach is used in conjunction with other physical chemistry disciplines to drive and support product and process development in diverse areas such as cultured and frozen dairy products, viscous and pourable dressings, margarine and spreads among others.

A PhD or equivalent background in biological science with appropriate experience in the following microscopy techniques: TEM, freeze fracture and freeze substitution is required. Experience in Cyro-SEM, image analysis and computer imaging is favorable.

We offer an attractive compensation and full benefits package. Please send resume with salary history in confidence to: Manager, Technical Recruiting, Kraft General Foods, Technology Center, 801 Waukegan Road, Glenview, IL 60025. An Equal Opportunity Employer m/f/h/v.

KRAFT GENERAL FOODS

CNS Pharmacologist

Whitby Research, Inc., a wholly owned subsidiary of the Ethyl Corporation, is a pharmaceutical company committed to the discovery and development of new drugs. The company currently has an opening for a CNS Pharmacologist.

The successful candidate will be involved in the development of bioassays using in vivo models including behavioral models to evaluate the specificity and efficacy of new chemical entities developed by the company. This person will also coordinate various research programs with academic and industrial scientists worldwide.

Neuroscientists interested in applying for this position should have a Ph.D. with three or more years' postdoctoral experience in CNS physiology and pharmacology. Industrial pharmaceutical experience is desirable. Expertise in behavioral pharmacology or psychopharmacology and excellent oral/written communication skills are essential.

Whitby Research, Inc. is located in Richmond, Virginia, and offers a stimulating intellectual environment ideal for career growth. Please send resume to:

Manager, Human Resources
Whitby Research, Inc.
P.O. Box 27426
Richmond, Virginia 23261-7426



Equal Opportunity Employer



The University
of
British Columbia

BIOTECHNOLOGY LABORATORY Fermentation/Process Engineering Group

The University of British Columbia has recently initiated the Biotechnology Laboratory under the directorship of Dr. Michael Smith. Its objective is to foster an interactive approach to problems in biotechnology. Applications are invited for a tenure track appointment at the rank of Assistant Professor. Applicants must have a Ph.D. degree; post-doctoral experience is an asset. Substantial start-up funding will be provided. The individual appointed to the Biotechnology Laboratory will have a joint appointment with an appropriate academic Department and will teach and supervise undergraduate and/or graduate students in that Department's programs or in academic programs to be established under the aegis of the Biotechnology Laboratory. At this time, a candidate is sought with research expertise in either of the following areas of Bioprocess/Genetic Engineering:

DOWNSTREAM PROCESSING - Applicants should be interested in developing a research program involving novel purification methods and/or aspects of chemical engineering applied to large-scale protein recovery. Candidates with industrial experience and a strong academic background are encouraged to apply. The successful candidate would be expected to develop a teaching program bridging the biochemical and engineering disciplines related to downstream purification.

PROTEIN/GENETIC PROCESSING - Applicants should be experienced in the application of genetic engineering and/or biochemical principles to protein production. The successful candidate would be expected to develop an active research program in the area of protein engineering, expression and/or purification of biologically or industrially important proteins. The successful candidate would be expected to develop a teaching program bridging the genetic and biochemical engineering disciplines involved in downstream purification.

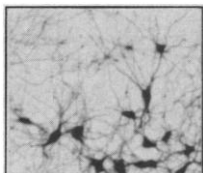
The appointment will be made starting July 1st, 1991 or as soon as possible thereafter. Closing date for applications is November 30, 1990. Salary will be commensurate with qualifications and experience. The University of British Columbia is committed to the Federal Government's employment equity program and encourages applications from all qualified individuals. In accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents.

Applications, including a full c.v., plans for future research (approximately 2-3 pages), and the names, addresses and phone numbers of three references, should be sent to: Mrs. Darlene Crowe, Administration, Biotechnology Laboratory, The University of British Columbia, Room 237 - 6174 University Boulevard, Vancouver, B.C. CANADA V6T 1W5.

NEUROBIOLOGY AT ROCHESTER Tenure Track Faculty Positions

The Department of Neurobiology and Anatomy at the University of Rochester School of Medicine is recruiting research-oriented neuroscientists capable of contributing to educational programs in gross anatomy and neural science. Our departmental faculty provide a broad base of collaborative neuroscience research opportunities that range from molecular through systems approaches. Strong interdepartmental programs serve as bridges to several clinical programs, particularly in areas of neurodegenerative disorders.

Established or newer investigators are invited to forward a current C.V., 3 selected reprints, the names of 3-5 references and a letter of transmittal. As a courtesy to references, please do not request that letters be sent at this time. Opportunities will exist at the Society for Neuroscience Meeting for preliminary interviews through the placement service. Address correspondence to:



John R. Sladek, Jr., Ph.D.
Kilian and Caroline Schmitt Professor
Chair of Neurobiology and Anatomy
Univ. of Rochester School of Medicine
601 Elmwood Avenue, Box 603
Rochester, New York 14642

DIAGNOSTIC PRODUCT DEVELOPMENT SCIENTIST

Amgen, an established leader in the field of biotechnology, has a position available in Diagnostic Product Development. The rapidly expanding Diagnostics group is located in Boulder, Colorado.

The successful Development Scientist candidate should have an MS or Ph.D. with at least 5 years of diagnostic product and process development experience and supervisory experience. A knowledge of statistical experimental design and a track record of successful diagnostic development are ideal. This person will be responsible for coordinating all aspects of a product's diagnostic development, including costs, scheduling, and transfer to manufacturing.

Amgen offers an excellent compensation and benefits package and the unique opportunity to contribute to significant research programs. If you have the necessary skills and qualifications, please send a resume, in confidence, to:

AMGEN BOULDER, INC.
Department 233B
2045 32nd Street
Boulder
CO 80301

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GENETIC TOXICOLOGIST

MICROBIOLOGICAL ASSOCIATES, INC., a leading biological testing and research service company, has an immediate opening for a Genetic Toxicologist at our Rockville, MD Life Science Center.

The successful candidate will act as study director in the in vitro mammalian cell mutagenesis laboratory supervising a staff of two laboratory supervisors and six biologists. Responsibilities will include contract testing activities as well as participation in research programs.

Requirements include a Ph.D. degree, background in mammalian cell mutagenesis or in vitro toxicity assessment is desirable.

Microbiological Associates, Inc.'s 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
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DIRECTOR

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

Opening Date: October 15, 1990 Closing Date: November 30, 1990

(All Applications must be postmarked by the closing date.)

The National Institutes of Health (NIH) invites nominations and applications for the position of Director, National Institute of Environmental Health Sciences (NIEHS). The Director is responsible for management and direction of one of the preeminent centers for toxicology research in the world, focused on carrying out its research mission: to seek the cause of and ways to prevent environmentally-associated health problems. Programs encompass intramural laboratory research and extramural (contracts and grants) activities on the environmental health sciences. The Director is responsible for the coordination and direction of all programs and activities in the Institute and serves as principal advisor to the Director, NIH, on environmental health-related matters.

The Director, NIEHS also serves in a dual role as the Director, National Toxicology Program (NTP). The NTP is a coordinated effort among DHHS agencies to characterize the toxicity of chemicals.

This is a Civil Service position in the Senior Executive Service (SES), with a base salary from the ES-1 to the ES-5 pay level (currently \$71,200 to \$81,400 per year) depending on qualifications. SES members are eligible for various bonuses and awards, and physicians are eligible for a comparability allowance of up to \$20,000 per year, although total compensation cannot exceed the rate of Executive Level I (currently \$107,300 per year). (Alternatively, applicants may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The SES individual selected, if not presently in the Senior Executive Service, must serve a one-year probationary period.

For more information, contact Mr. Alvin L. Wade, Jr. at (919) 541-1993. The following forms are *required*: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography. These forms may be submitted to:

Mr. Alvin L. Wade, Jr.
National Institute of Environmental
Health Sciences
Personnel Office (1-01)
P.O. Box 12233

Research Triangle Park, North Carolina 27709

All applicants tentatively selected for this position will be required to submit to urinalysis prior to appointment to screen for illegal drug use.

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 or mental handicap, age, or membership or non-membership in an employee organization.

Scientists

Genentech, Inc., a leader in the field of biotechnology, is seeking scientific professionals to make innovative and original contributions to our expanding facility.

Scientist/Protein Chemistry

In this position, you will characterize protein pharmaceuticals in biological matrices and, in collaboration with other scientists, define the disposition of protein drugs.

We require a Ph.D. in Biochemistry, Protein Chemistry or Analytical Chemistry and 2+ years of direct experience. Extensive experience in the isolation, purification and characterization of proteins as well as hands-on experience with HPLC, electrophoresis and radiolabeling proteins are also essential. Familiarity with immunoassays and bioassays is desirable. Dept. NSM.

Scientist/Metabolism

The successful candidate will have a solid metabolism background with experience performing in vivo and in vitro disposition studies of peptides.

We require a Ph.D. in Drug Metabolism, Biopharmaceutics, Toxicology or Analytical Chemistry and 2+ years of relevant experience. Additionally, you must have experience in the isolation and identification of peptide metabolites and with isolated perfused organ techniques. Knowledge of HPLC/MS and NMR will be an asset. Dept. NSR.

Associate Scientist/Cell Biology

For this position, you will possess extensive experience in cell culture and biochemistry techniques which will be used to develop bioassays and activity assays for recombinant proteins and growth factors. Requirements are a Ph.D. in Cell Biology or Biochemistry plus a year of related experience. Dept. NSV.

Genentech offers an excellent salary and benefits package and believes strongly in personal growth and advancement. For immediate consideration, please send your C.V., indicating Dept. of interest, to Nancy Symonds, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE MOLECULAR RETROVIROLOGY

Postdoctoral research associate to study molecular mechanisms of HIV replication with emphasis on the protease and reverse transcriptase. Experience in molecular biology, biochemistry, and/or virology required. Send curriculum vitae and letters of recommendation to: **W. Gary Tarpley, Ph.D., Department of Pathology and Microbiology, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-3135.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE.

To study the regulation of cell motility. Research in structure/function relation, developmental regulation, and cell biology of several Ca^{2+} - and polyphosphoinositide-regulated actin filament modulating proteins. Experience in molecular biology, protein chemistry desirable. Please send curriculum vitae and three letters of recommendation to: **Helen L. Yin, Department of Physiology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL OR RESEARCH ASSOCIATE.

Position available for an individual to participate in funded developmental program of immunotoxin therapy. Position will require a background in tissue culture and immunology. Project involves the use of tumor imaging and autoradiographic techniques to study the effects of immunotoxin molecular/structural modification on localization to tumor in vivo, with resulting effects on tumor viabilities. Send cover letter and curriculum vitae to: **LW, Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE

A postdoctoral/research associate position is available immediately to study Herpesvirus and/or HIV at the molecular level (i) receptor-ligand interaction in gene activation, (ii) purification of soluble mediators and cellular transcriptional factors, and (iii) cDNA cloning. Requires Ph.D. degree. Must have a strong background in protein chemistry, HPLC, and molecular biology. Applicant should send curriculum vitae, statement of research interest and objectives, name and address of three references to: **Dr. Meihan Nonoyama, Tampa Bay Research Institute, 10900 Roosevelt Boulevard, St. Petersburg, FL 33716.**

The Department of Pediatrics at the University of Illinois at Chicago seeks a Ph.D. with background in molecular biology as a **RESEARCH ASSISTANT PROFESSOR** to conduct and participate in molecular endocrinological studies involving Western blot, Northern blot, and Southern blot analysis of genes. Position available immediately. Contact: **Dr. Songya Pang, Pediatric Endocrinology (m/c 856), 840 South Wood Street, Chicago, IL 60612.** Telephone: 312-996-1795. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

BONUS CIRCULATION FOR YOUR CLASSIFIED AD

Our issue of 16 November 1990 will be distributed to scientists attending the meeting of the American Society of Cell Biologists (ASCB) in San Diego, California, 9 to 13 December 1990.

Deadline for submission of line classified ads:

1 November 1990

Science

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POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR (MOLECULAR/CELLULAR BIOLOGY). The Department of Animal Sciences, University of Illinois at Urbana-Champaign (UIUC), invites applications for the position of research assistant professor (nontenure-track) in the area of gene mapping and expression. The individual will be involved in a multidisciplinary program targeted at identifying genes associated with growth, development, and disease resistance in domestic animals. Interactions with existing programs in gene mapping, transgenesis, embryo cloning, and development of recombinant DNA technologies are encouraged. Qualifications include a Ph.D. in biochemistry, molecular biology, genetics, animal sciences, or a related field. Postdoctoral experience is desired. Salary commensurate with qualifications. Candidates should submit a letter of intent, curriculum vitae, and three letters of reference by 1 December 1990 to: **L. B. Schook or H. A. Lewin, Department of Animal Sciences, 1207 West Gregory Drive, University of Illinois, Urbana, IL 61801.** Telephone: 217-244-5616. The UIUC is an Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE MICROBIAL ECOLOGIST

Applications are invited for the position of research associate in the Center for Water and the Environment, Natural Resources Research Institute, University of Minnesota, Duluth. The applicant will be expected to develop a research program to study the effects of contaminants on microbial communities in sediments and the impact of microbes upon the fate and transport of sediment-bound pollutants. The position is a fixed-term appointment, which is renewable annually. The successful candidate will be expected to develop a self-supporting program and so should demonstrate the ability to attract external funding. In addition, the candidate should have a strong record of presentations and publications.

Minimum qualifications: a Ph.D. in the physical sciences with postdoctoral experience in microbial science.

Desired qualifications: (i) publications in peer-reviewed journals, (ii) postdoctoral experience in microbiology, and (iii) demonstrated record of extramural grant support and grant-writing experience.

Minimum salary will be \$28,000 per year. To apply, send a current résumé and the names, addresses, and telephone numbers of three references to: **Research Associate/Microbial Ecologist Search Committee, Natural Resources Research Institute, 5013 Miller Trunk Highway, Duluth, MN 55811.** Applications must be postmarked by 31 October 1990.

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

RESEARCH ASSOCIATE. Experienced macromolecular x-ray crystallographer, to work on viral receptors and HIV-related proteins, within a large structural biology laboratory dedicated to use of x-ray crystallography for analysis of molecular organization of viruses, viral glycoproteins, and viral receptors. The position involves: (i) collaboration with a group of protein crystallographers determining the structure of the HIV receptor, from crystals of recombinant, soluble variants; (ii) collaboration with at least one other research associate in the refinement of the crystal structure of simian virus 40; and (iii) initiation of crystallographic studies on other virus-related proteins. The responsibilities to these projects involve: (i) serving as a resource person with special expertise in computational methods, for the HIV-receptor and SV40 projects, and (ii) independently carrying out structure determinations that require experience in all aspects of protein crystallography. Ph.D. or equivalent and 3 years of experience at the postdoctoral level with computational methods in protein and virus crystallography: data processing (film and diffractometer), structure determination by molecular replacement, refinement, difference Fourier methods. Knowledge of Fortran and VAX/VMS essential. Programming experience in writing crystallographic Fourier programs. Backgrounds in small-molecular crystallography with experience with direct methods. Experimental experience should include: protein purification and crystallization, crystal mounting, and data collection by the rotation method and by diffractometry. Salary: \$35,000 per annum. Send résumés to: **Department of Employment and Training, Special Programs, P.O. Box, 19 Staniford Street, Boston, MA 02114** and refer to: Job Reference # 00822.

POSITIONS OPEN

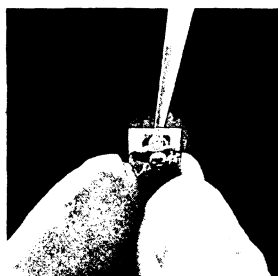
NEUROPHYSIOLOGIST. To join a research group studying the role of excitatory amino acid and GABA receptors in synaptic plasticity during ethanol/CNS depressant tolerance and physical dependence. Candidates should have a Ph.D. and preferably, experience with brain slice neuropharmacology, intracellular/patch-clamp recording techniques, and neuronal cell isolation/culture techniques. **RESEARCH ASSOCIATE** position is available immediately for a minimum of 2 years. Salary is based on experience. Send résumé, statement of research interests, and names of three references to: **Dr. Gerald D. Frye or Dr. William H. Griffith, Department of Medical Pharmacology, Texas A&M University, College Station, TX 77843-1114.**

RESEARCH ASSOCIATE. Senior protein crystallographer, to lead a group working on the structure of HIV-related proteins. The group will function within the context of a larger structural biology laboratory dedicated to use the x-ray crystallography in studying molecular organization of viruses, viral glycoproteins, and virus-receptor interactions. The position involves (i) determination of the structures of the HIV receptor from crystals of recombinant, soluble variants; (ii) determination of the structures of other HIV-related proteins, as crystals become available; and (iii) direction of a group of five or more co-workers on these projects. Ph.D. or equivalent and 6 years of postdoctoral experience with protein purification and crystallization, crystal mounting and data collection by diffractometry and film methods (rotation, precession, use of Optronics film scanner), data processing using CCP4-type programs, searching for heavy atom derivatives, difference Patterson interpretation, electron-density-map interpretation, protein model-building, refinement. Computational experience with Fortran and VAX/VMS. Should have demonstrated leadership ability to organize and direct staff scientists, students, and technicians. Salary: \$38,000 per annum. Send résumés to: **Department of Employment and Training, Special Programs, P.O. Box, 19 Staniford Street, Boston, MA 02114** and refer to: Job Reference 00828.

ASSISTANT STAFF SCIENTIST. Responsible for independent research in (i) conditions under which B cells produce cytokines and B cells respond to cytokines using antigen-specific B cell purification, antigen-specific B cell activation assays, enzyme immunoassays, and limit dilution analysis; and (ii) effects of cytokines, including IL-2, IL-4, and IL-7, on the growth and maturation of cytotoxic T cells and lymphokine-activated killer cells. Must have proof of legal authority to work in the United States. Requirements: Ph.D. in immunology or a related field. Ph.D. research must include study of effects of cytokines upon lymphocytes, including B cell limit dilution analysis, purification of antigen-specific B cells, antigen-specific B cell activation assays, and enzyme immunoassays. Must have published three articles on related topics in refereed scientific journals. Position located in Seattle, Washington. Working conditions: 40 hours per week, 9 a.m. to 5 p.m., Monday to Friday. Salary range: \$28,800 to \$33,000 per annum, depending on experience. Equal Opportunity Employer. Please send résumé within 30 days of publication date to: **Employment Security Department, ES Division, Job #196600, Olympia, WA 98504.**

ASSOCIATE STAFF SCIENTIST. Responsible for independent research in effects of lymphokines on functioning of human T and B lymphocytes. Must prepare reports of results of laboratory studies undertaken for publication in professional journals. Must have proof of legal authority to work in the United States. Requirements: Ph.D. in immunology, cell biology, hematology, or a related field. Minimum of 2 years of experience in scientific research in human immunology, including research in effects of lymphokines and mitogens on (i) growth and differentiation of human B and T cells, (ii) interaction between human T and B cells, and (iii) interaction among human B cell sub-populations. Research must include technique of flow cytometric analysis. Must have published three articles on related subjects in refereed scientific journals. Position located in Seattle, Washington. Working conditions: 40 hours per week, 9 a.m. to 5 p.m., Monday to Friday. Salary range: \$31,500 to \$42,000 per annum, depending on experience. Equal Opportunity Employer. Please send résumé within 30 days of publication date to: **Employment Security Department, ES Division, Job # 192662-A, Olympia, WA 98504.**

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- Session 4—Application of Protein in Crystallography in Drug Design
- Session 5—Neuroreceptors

SPEAKERS WILL INCLUDE: (Partial List)

N. Ronald Morris, UMD New Jersey • Teruhiko Beppu, University of Tokyo • Robert Haselkorn, University of Chicago • Hirofumi Uchimiya, Hokkaido University • Frank Lee, DNAX Research Institute • Toshio Hirano, Osaka University • John Erickson, Abbott Laboratories • Masaaki Matsushima, Protein Engineering Research Institute • Glauco Tocchini-Valentini, CNR, Rome, Italy • Shigetada Nakanishi, Kyoto University

Poster presentations will be exhibited for all five topics of the Symposium

For further information, please contact:

Haruki Yokochi
BioTec Symposium Office
Tampa Bay Research Institute
10900 Roosevelt Boulevard
St. Petersburg, FL 33716
Tel: (813) 576-6675 • Fax: (813) 577-9862

GRADUATE PROGRAM CELL AND MOLECULAR BIOLOGY (MULTI-DEPARTMENTAL)

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- MOLECULAR GENETICS
- DEVELOPMENTAL BIOLOGY
- ONCOGENES AND GROWTH FACTORS
- STRUCTURAL BIOLOGY
- NEUROBIOLOGY
- MOLECULAR VIROLOGY AND IMMUNOLOGY

The Graduate School at BAYLOR COLLEGE OF MEDICINE has recently created a graduate program in CELL AND MOLECULAR BIOLOGY stressing basic research in the above areas. Students accepted for studies leading to the Ph.D. degree will receive financial support. For further information contact:

Dr. Savio Woo, Director
Graduate Program in Cell and Molecular Biology
Baylor College of Medicine, Room 185A
One Baylor Plaza
Houston, Texas 77030
Phone: (713) 798-6557

POSITIONS OPEN

NUTRITIONIST/RESEARCH ASSISTANT. Chelation therapy. Ph.D. degree required. Food and/or nutrition science. Experience in chelation therapy mode-of-approach to dietary management of major ailments including 5 to 10 years overall experience in nutrition research. Duties include consultations with patients (under supervision of M.D.), recommending specific diet plans, ongoing research, and data evaluation in area of chelation therapy, developing new dietary regimens and management programs for variety of major ailments, including atherosclerosis, lithogenesis, liver malfunction, and other circulatory diseases. Forty hours per week. Salary: \$35,000 per year. Interview/job site: San Diego. Send this ad and résumé to: **Job #KV17878, P.O. Box 9560, Sacramento, CA 95823-0560**, no later than 27 October 1990.

RESEARCH SCIENTIST

The Department of Obstetrics and Gynecology at the State University of New York (SUNY) at Stony Brook is recruiting for a research scientist. A Ph.D. in biological or physical science and a minimum of 2 years of experience in DNA sequencing are required. The successful candidate will work to better define the association between point mutations in the insulin receptor gene and the polycystic ovary syndrome phenotype. The major focus will be sequencing insulin receptor DNA from patients from pedigrees with severe insulin resistance and polycystic ovaries.

Interested candidates should send curriculum vitae and three names of references to:

Robert Barbieri, M.D.
Professor and Chairman
Department of Obstetrics/Gynecology
SUNY at Stony Brook
Stony Brook, NY 11794-8091

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SENIOR NUCLEIC ACIDS CHEMIST. Triplex Pharmaceutical Corporation, located in The Woodlands, north of Houston, Texas, is currently seeking an experienced Ph.D. senior research chemist. The candidate should have three or more years of postdoctoral research experience with reputed scientists in the field and should be capable of conducting independent research in the synthesis, purification (HPLC, flash and ion-exchange chromatography techniques), and characterization (¹H NMR, 2D NMR, CMR, mass and UV spectroscopy) of heterocycles, nucleosides, nucleotides, and oligonucleotides (solid/solution phase) with a strong background in medicinal chemistry. Should have extensive publication record. The successful candidate will devise new chemical methods for the preparation of target triplex-forming oligonucleotides with base, back bone, and end modification. Forty hours per week. Salary: \$45,000 to \$48,000 per year, depending on experience. Closing date: 15 November 1990. Please send detailed résumé, publication/patent list, and three letters of recommendation (in confidence) to: **Dr. G. R. Revankar, Director, Nucleic Acids Chemistry, Triplex Pharmaceuticals, 9391 Grogans Mill Road, The Woodlands, TX 77380.** An Equal Opportunity Employer.

STAFF TOXICOLOGIST. For manufacturer in Cincinnati area. Responsibilities include evaluating the potential health effects of new ingredients and formulations for laundry products. This will involve the design, implementation, and interpretation of a breadth of toxicology studies (including teratology, neurotoxicity, and acute and chronic toxicity studies), culminating in preparation of risk assessments. If toxic effects are identified during testing, will be responsible for coordinating tests of the materials and evaluating the results to determine the specific mechanism of action causing the toxicity. Coordinate multi-disciplinary teams of scientists and interact with contract facilities and regulatory agencies at both the state and federal level. Ph.D. in toxicology or life science field in toxicology required plus 2 years in job offered or 2 years in postdoctoral toxicologic research. Two years of experience must involve neurotoxicology, teratology, in vitro test methods, acute and chronic toxicity testing. Forty hours per week, 8:30 a.m. to 5:30 p.m., Monday to Friday; \$51,300 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **S. Holton, JO#1099731, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSITIONS OPEN

RESEARCH SCIENTIST

Position available immediately for a Ph.D. or M.S. scientist interested in studying cellular and molecular regulation of amino acid metabolism. Experience in molecular biology and cell culture is a prerequisite. A long-term commitment is preferred. Excellent salary (\$28,000 to \$40,000) commensurate with experience. Send curriculum vitae to: **Director, Surgical Metabolism, Box J-286, University of Florida College of Medicine, Gainesville, FL 32610. Telephone 904-395-0494.** The University of Florida is an Equal Opportunity Employer.

RESEARCH ASSISTANT

Highly motivated and well-organized individual needed to assist with laboratory and clinical research in vascular surgery including: (i) biochemical analysis and interpretation of results for review by principal investigator, (ii) experimental microsurgical techniques, and (iii) tissue and cell culturing. Co-authors and assists in the preparation of scientific publications and grant applications.

MINIMUM QUALIFICATIONS:

B.S. in biochemistry, chemistry, or biology with 2 to 3 years of laboratory experience,

or

M.S. in biochemistry, chemistry, or biology with 1 to 2 years of experience.

Excellent experience package including medical/dental and prescription plans. Contact: **Steven Levine, 212-231-0674**, or FAX your résumé to **212-231-9811.**

SITUATIONS WANTED

EDUCATOR/Ph.D. MICROBIOLOGIST, strong in humanities, seeks transdisciplinary or honors program at teaching-oriented college, university. Laboratory animal experience (D.V.M.). **Box 115, SCIENCE.**

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GRADUATE STUDIES IN BIOLOGY. The Department of Biology at Northeastern University invites applications for graduate study leading to M.S. or Ph.D. degrees with concentration in biochemistry, botany, ecology, marine biology, microbiology, molecular and cellular biology, physiology, or vertebrate biology. Teaching assistantships (including tuition waiver) available for qualified applicants beginning September 1991. For information, contact: **Graduate Coordinator, Department of Biology, Northeastern University, Boston, MA 02115.** Northeastern University is an Equal Opportunity/Affirmative Action Title IX Employer.

ANNOUNCEMENTS

The Center for Indoor Air Research, a new nonprofit corporation which sponsors objective scientific research on the full gamut of indoor air research topics, has available its 1991 Request for Applications booklet. For the provision of sufficient time for the Science Advisory Board and peer-review process to occur, applications for 1 January 1992 funding must be received by 1 May 1991. For more information on the Center for Indoor Air Research and/or a copy of the Request for Applications booklet, call or write:

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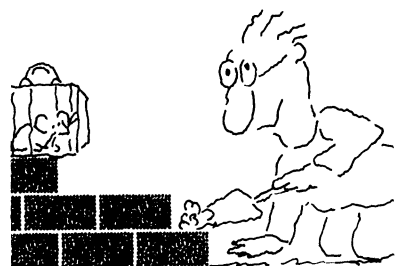
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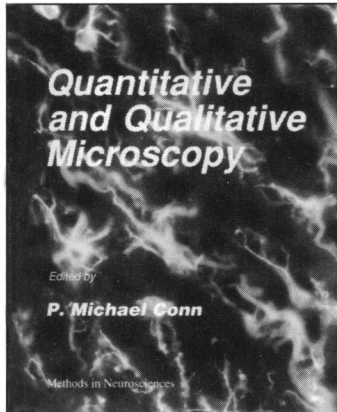
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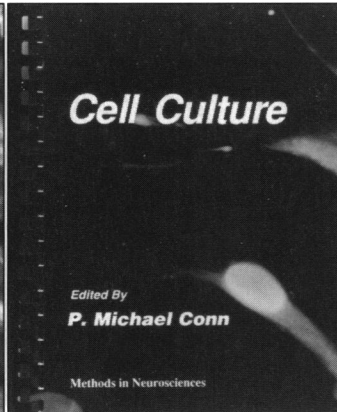
edited by
P. Michael Conn

Because of the significance of morphology and cellular communication unique to the functioning and interdependence of neural systems, many of the advances in the neurosciences rely on classic as well as new microscopy techniques.

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NEW! Cell Culture

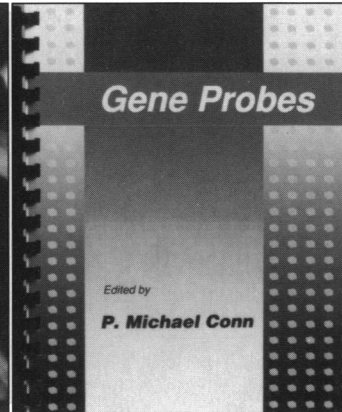
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The ability to assess the response of neural cells is an important goal of research in the neurosciences. The means to measure responses in a chemically defined medium is a positive feature of the use of cell culture and is the major reason its use is so important in this discipline.

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Gene Probes

edited by
P. Michael Conn

Among scientific disciplines witnessing the greatest growth in recent years is the neurosciences. This volume describes the many and varied uses of gene probes in the study of neuroscience. This is especially important since virtually all expression of the differentiated state begins at the level of gene activation.

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 - Screening, sequencing, and cloning
 - Lineage analysis
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edited by
P. Michael Conn

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HIV regulatory protein

The protein, a regulatory protein of the human immunodeficiency virus, contains 84 amino acids, including a Cys-rich cluster and a highly basic region. The fusion protein CII-tat was expressed in *E. coli* and isolated from the soluble cell lysate by cation exchange chromatography at 4°C.

IgG was loaded through the pump onto the column. The acidic proteins, the majority of the material, were washed through the column followed by gradient elution of the strongly basic CII-tat. The collected fraction was further purified by reverse phase chromatography. Sequencing of the first 20 N-terminal amino acids confirmed the identity of the product.

Chromatogram provided by:
Dr. R. V. J. Kelle, Transgene S.A., Strasbourg, France.

Fast micropurification

Nano-porous resin (NPR) column materials offer the possibility of extremely fast and efficient separation of protein mixtures. The purification of cytochrome *c* from *R. viridis* required only sonication, centrifugation, and ion exchange chromatography of the crude supernatant.

Previously, the cytochrome had been prepared using low pressure ion exchange chromatography, followed by chromatofocusing, requiring more than a full day. The NPR column allowed isolation of 0.5 µg of pure protein in less than 30 minutes.

Chromatogram courtesy of: T. Lattapich, Max Planck Institute, Martinsried, FRG.

Enzyme purification

Aspartate aminotransferase (*L*) is a dimeric protein, molecular weight 87,000 and pI 4.6, with pyridoxal phosphate as coenzyme. The enzyme was purified from strain of *E. coli* containing a multicopy plasmid with the *cat* gene, which results in 100% overexpression of the enzyme.

Cells were sonicated, centrifuged, and the supernatant applied to a strong anion exchange column. Absorption by the coenzyme at 360 nm is held identifying AAT during elution. This single chromatography purification step recovered active protein 95% pure by the A_{360}/A_{280} ratio.

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