RECOMBINANT DNA

WORKSHOPS

Beginning in March, 1988, IBI will offer monthly workshops in the basic concepts and laboratory techniques of recombinant DNA. The four-day "hands-on" course is designed for teachers, businessmen, or researchers with a scientific background but without previous experience in recombinant DNA technology.

Techniques covered in the workshop include:

- care and handling of bacterial cultures
- isolation and purification of plasmid DNA
- restriction enzyme digestions and mapping
- agarose gel electrophoresis
- recovery of DNA from agarose gels
- use of linkers and DNA modifying enzymes to join DNA fragments
- transformation of competent bacterial cells

Workshops will be conducted by David F. Betsch, Ph.D. of the IBI staff. Tuition will be $495.00 ($US) which includes all consumable materials. Arrangements for meals or lodging are left to the individual participants.

Upcoming Workshop sites and dates include:

- March 15 – 18, 1988 Middletown, CT
- April 26 – 29, 1988 Norman, OK
- May 10 – 13, 1988 St. Louis, MO

If you are interested in sponsoring a workshop at your facility, there are only a few requirements.

Sponsors will provide:

- a lab facility with a capacity for 20 people and available for one week, Monday through Friday, 9:00 a.m. – 5:00 p.m.
- autoclave, incubators and refrigeration

For more information or registration, please call

David F. Betsch, Ph.D.
IBI – A Kodak Company
(800) 243-2555
(203) 786-5600

The Cutting Edge of Molecular Biology
ACADEMIC LABORATORY PATHOLOGIST—The Department of Pathology at the University of Pittsburgh is seeking an academic pathologist with interest and experience in laboratory medicine for a fulltime faculty position at the assistant professor level. The successful candidate will work with three other pathologists in providing pathology services on an adult ambulatory care setting. Candidates must be Board-certified or eligible in CP though eligibility certification is not required. Applicants with research interests in laboratory medicine are encouraged to apply. Responsibilities also include medical student and resident education. Inquiries will be held in strict confidence. Applications and bibliographies should be sent to: University of Pittsburgh School of Medicine, Department of Pathology, 776 Scaife Hall, Pittsburgh, PA 15260-R62-9. The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer. Deadline is 30 June 1988.

ACADEMIC SUPPORT DIRECTOR AND CHEMICAL CRYSTALLOGRAPHER

Applications are invited for two faculty positions at associate professor level as Academic Support Director and Chemical Crystallographer. Salary is competitive. Candidates for the position should have demonstrated ability in administering academic support programs for minority and disadvantaged students and have a Ph.D. degree in chemistry with a emphasis on x-ray crystallography, extensive research experience in x-ray crystallography, publications minimum of 7 years of university level teaching experience in chemistry. Responsibilities include the development and administration of academic support programs for minority and disadvantaged premedical and medical students, development and maintenance of an active research program in x-ray crystallography, studies of liquid crystal, antiancic agents and other bioactive compounds, and teaching of chemistry courses. Applicants should submit a letter of application, curriculum vitae, and three letters of recommendation accompanied by telephone numbers, by 1 March 1988, to: University of Virginia, Charlottesville, VA 22908. An Equal Opportunity/Affirmative Action Employer.

AEROCOMEDICAL ENGINEERING—The newly organized Aeromedical Engineering Group at McDonnell Douglas has openings in the areas of advanced design in biocynematics, crew station design, life support systems, pilot-vehicle interface, artificial intelligence, man-modeling, and crew threat analysis. Interested applicants must have B.S. degree in engineering and degree in physics or biomedical engineering or aircrew experience. Please send resume in confidence to: Manager, Professional Staffing, McDonnell Douglas Corporate, P.O. Box 4012, Department 62-R789, St. Louis, MO 63042. Equal Opportunity Employer, M/F.

ASSISTANT ENGINEER—Ph.D. in chemical engineering. Six months of experience as a researcher in numerical analysis and simulation modeling of energy systems. Research should include the FLUITH computer code, and fluidization, especially mechanisms of bubble formation and migration through the bed. Will perform hydrodynamic modeling and numerical simulation of multiphase flows. Development of multidimensional computational fluid dynamics computer codes. Salary: $3250 per month; 40 hours per week; 8:30 a.m. to 5:00 p.m. Send resume to: Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60607. Reference #7683-L, An employer paid ad.

DEPARTMENT OF BIOLOGY ASSISTANT PROFESSOR POSITION

The Department of Biology, University of Wisconsin Center System, invites applications for a full-time, tenured-track position in Molecular Biology at the assistant professor level on the Rock County Campus, Janesville, beginning fall, 1988. A doctorate is required with strengths in genetics and molecular biology with emphasis in microbiology, botany, and genetics. Send curriculum vitae and three letters of reference to: Dr. Koby Crabtree, Chair, Department of Biology, University of Wisconsin Center—Marquette, 518 South 7 Avenue, Wauwau, WI 54401 by 20 March 1988. The University of Wisconsin is an Affirmative Action/Equal Opportunity Institution.

PERSONNEL PLACEMENT
DEPARTMENT OF ORAL BIOLOGY
STATE UNIVERSITY OF NEW YORK
BUFFALO

Applications are invited for an ASSISTANT PROFESSOR level position in x-ray diffraction. The successful applicant will operate the departmental x-ray diffractometer, interacting with present faculty in ongoing projects and developing a successful research program. Minimal qualifications include a Ph.D. with 3 years of postdoctoral training in chemistry, physics, biology, or geology and experience in x-ray crystallography. Experience in crystallization techniques, single crystal data analyses, x-ray and neutron protein structural analysis techniques is required. Salary is $45,000. Send résumé with names of three references by 31 March 1988 to: Dr. Michael J. Levine, Department of Oral Biology, SUNY/Buffalo, 3435 Main Street, 109 Foster Hall, Buffalo, NY 14214. SUNY/Buffalo is an Equal Opportunity/Affirmative Action Employer.

AUBURN UNIVERSITY
ASSISTANT PROFESSOR, BIOLOGY/PLANT ECOLOGY
The Department of Botany and Microbiology, College of Sciences and Mathematics, Auburn University, invites applications for a tenure-track position. Applicants must have a Ph.D. and a strong background in plant ecology. Responsibilities include teaching of general botany at the undergraduate level and plant ecology at the undergraduate and graduate levels, and the development of a creative and vigorous research program. Applicants will be expected to actively seek extramural support for a research program. Applicants should send a CV and a one page statement of research interests by 15 January 1988 to: Dr. Bryan Trudel, Chair, Department of Botany and Microbiology, Auburn University, AL 36849-5407. Phone: 205-824-6830. Position effective Summer 1988. Applications will be accepted until the position is filled. Auburn University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

ASSISTANT PROFESSOR, EUKARYOTIC GENETICS/MOLECULAR GENETICS
The Division of Biology at Kansas State University has a tenure-track position available at the assistant professor level effective September, 1988. Applicants are invited from investigators with postdoctoral experience in eukaryotic genetics and/or molecular genetics. The Division has a strong program in biological research, excellent facilities and a distinguished faculty with several millions of dollars in extramural grants. The successful candidate will be expected to establish a vigorous and creative research program to interact with graduate and undergraduate instruction. Candidates should apply by 21 March 1988 by submitting curriculum vitae, a brief description of future research plans, and having three letters of reference sent to: Dr. Terry C. Johnson, Director Division of Biology Ackerman Hall Kansas State University Manhattan, KS 66506 KSU is an Equal Opportunity/Affirmative Action Employer.

AQUATIC/ANALYTICAL CHEMIST
Northrop Services, Inc., is seeking an individual with experience in dilute, natural water systems to work in a national laboratory on the effects of radionuclide migration on aquatic resources. Candidates should have an M.S. (or comparable background), and several years of field and/or laboratory experience. Database management skills or a background in aquatic biology are desirable but not required. Responsibilities include implementation and coordination of a quality assurance program for large, multidisciplinary, national laboratory projects. Excellent communication skills (oral and written) are essential. Send résumé and names of three references to: M. Susan Bell, Northrop Services, Inc., 1600 SW Western Boulevard, Corvallis, OR 97333. Cite No. 4520-014-87 in all correspondence. Northrop is an Affirmative Action/Equal Opportunity Employer.

STOCKTON STATE COLLEGE
BIOLOGY PROGRAM
A 1-year position in biology is available for September, 1988 at the ASSISTANT PROFESSOR OR INSTRUCTOR level in the area of Aquatic Biology. Successful applicant will teach a group of college level courses to include a strong, seven-person Biology Program in a young, liberal-arts college in rural South Jersey. Expected teaching load includes the introductory courses and cellular biology course, a general education course in humanities, nutrition, and a course of the candidate's choosing. Screening will begin on 27 February 1988. Send letter, résumé, and three letters of reference to: Dr. Donald Plank, Chair, Faculty of Natural Sciences and Mathematics, Stockton State College, Pomona, NJ 08240. Stockton is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. R 001999

ASSISTANT PROFESSOR, PSYCHOBIOLOGY
The Department of Psychology, Clark University, seeking an individual for an assistant professor position to begin in September 1988 or 1989 (depend- ing upon availability of outstanding candidate). Applicants must be capable of teaching basic undergraduate and graduate courses in biological bases of behavior. The ideal candidate will have research interest in the interaction between biological determinants on the one hand and psychological or sociocultural determinants on the other. Send a letter of application, including a description of research plans and goals, curriculum vitae, one recent publication or three letters of recommendation is required. The search will be continued until a successful candidate is identified. Women and minorities are encouraged to apply.

ASSISTANT PROFESSOR (TENURE-TRACK) CLINICAL MICROBIOLOGY LABORATORY DEPARTMENT OF MEDICINE AND PATHOLOGY UNIVERSITY OF MINNESOTA
A tenure-track faculty position is available for candi- dates with a M.D. degree with subspecialty training in laboratory microbiology/pathology or infectious diseases with a minimum of 3 years of postdoctoral experience or research in clinical microbiology or microbial pathogene- rics/immunochemistry. Successful candidates are expected to interact with the Diagnostic Microbiology Laboratory. Demonstration of research productivity is desirable. The individual will be expected to contribute to the Clinical Microbiology Laboratory services, development of new diagnostic tests, and teaching undergraduate and graduate students and postdoctoral fellows. The individual should be expected to develop an independent research program. Send curriculum vitae and three letters of recommendation to: Chairperson Clinical Microbiology Search Committee University of Minnesota Box 198 UMC H Department of Laboratory Medicine and Pathology 420 Delaware Street S.E. Minneapolis, MN 55455 Deadline for receipt of applications is 15 April 1988. The University of Minnesota is an Equal Opportunity/ Educator and Employer and specifically invites and encour- ages applications from women and minorities.

Medical college enrolling its faculty. Invites applications from qualified Ph.D.'s and Pharm.D.'s to serve as ASSISTANT PROFESSOR level in the areas of pharmacology, microbiology, physi- ology and neuroanatomy. Title and salary commensurate with experience. Qualifications should include experience in the physical sciences and a doctorate. Send curriculum vitae, statement of proposed research, and reference letters to: Gloria S. Sorrells, Dean, New York College of Osteopathic Medicine, Old Westbury, NY 11556. Telephone: 516-626-6927.

Assistant Professor Immunology/Molecular Biology
Applications are invited for a position of assistant professor (tenure-track) in the Division of Immunology and Molecular Biology in the School of Medicine, University of Utah. Candidates should have strong train- ing records and interesting, original research plans. We seek an individual with a Ph.D. or equivalent, and a strong, active research scientist whose interests include molecular pathology, growth factor action, cellular immunology and receptor dynamics. Our group is part of the newly formed Immunology and Molecular Biology Program in Molecular Biology, which offers integrated studies in biochemistry, genetics, immunology, cell biology, and neurobiology. The successful candidate will complement our existing research programs, with individuals interested in molecular aspects of host-parasite interaction, the role of lymphocyte differentiation, or somatic cell gene rearrangement in particular areas. Interested persons should send their curriculum vitae, as well as three reference letters sent to: Dr. Raymond Daynes, Department of Pathology, Center for the Health Sciences, University of Utah, Salt Lake City, UT 84132. An Equal Opportunity/ Affirmative Action Employer. Closing date: 1 April 1988. Applications will be accepted after the deadline if no qualified candidate is identified.

THE UNIVERSITY OF TEXAS SYSTEM CANCER CENTER AT HOUSTON M.D. ANDerson CANCER CENTER AND TUMOR INSTITUTE
Applications are invited for several tenure-track posi- tions in the Department of Molecular Genetics both at the ASSISTANT AND ASSOCIATE PROFESSOR levels. Successful candidates will develop independent and innovative programs to investigate the molecular basis of cellular functions in normal and cancer cells. The following areas are of particular interest: (i) Investigation of human recessive cancer susceptibility genes and study of the mechanisms of action of their products. (ii) Intracel- lular mechanisms of action of their products. (iii) Molecular mechanisms of transcriptional regulation. (iv) Use of mouse genetics to examine developmental processes and formation of transgenic mice as model sys- tems for carcinogenesis, developmental abnormalities and other human diseases. Although these areas are of special concern, we are primarily interested in outstanding individuals working in the field of eukaryotic genetics who will develop vigorous and strongly interactive pro- grams.

Please apply before 1 May 1988 by sending curriculum vitae, a concise description of research interests, and name of three references to: Benoit de Crombrugghe, M.D. Professor and Chairman Department of Molecular Genetics (Box 11) The University of Texas System Cancer Center (UTSCC) 1515 Holcombe Boulevard Houston, TX 77230, U.S.A. Telephone: 713-792-2595 UTSCC is an Equal Opportunity Employer.

Assistant Associate Professor of Physiology
The Department of Physiology, Loyola University of Chicago at the Medical Center is seeking candidates for a tenure-track position at either the assistant or initial associate professor level. The department has strong research programs in cardiovascular physiolo- gy and pathophysiology. We are seeking an individual with strong and molecular and experimental comple- mentary to our systemic and integrative cardiovascular interests. Candidates must have a Ph.D. or M.D., an appropriate research publication record, and previous faculty status experience. A commitment to excellence in teaching medical and graduate students is required. The faculty is actively involved in the develop- ing a list of publications, teaching experience, a brief statement of research interests, and at least three references. Please submit curriculum vitae, not later than 15 March 1988, to: Dr. William F. Pilkitas, Ph.D., Professor and Chairman, Department of Physiology, Loyola University of Chicago, Stritch School of Medicine, 2160 South First Avenue, May-wood, IL 60153. Loyola University of Chicago is an Equal Opportunity/ Affirmative Action Employer.

SCIENCE, VOL. 239
DEPARTMENT OF PSYCHOBIOLOGY
UNIVERSITY OF CALIFORNIA

We invite applications for two assistant professor tenure-track positions in the general areas of cognitive neurobiology and molecular neurobiology. The positions will be available as early as July 1, 1988. The Department of Psychology emphasizes interdisciplinary approaches to the study of the nervous system and behavior. The current major research themes of the Department are development, reorganization following injury and disease, and learning and memory.

- **Cognitive Neurobiology**: We are seeking candidates who have demonstrated expertise in the organization of neural systems underlying cognition, cognitive changes induced by disease and aging, and/or neural modeling of cognitive processes.

- **Molecular Neurobiology**: We are seeking candidates who have demonstrated expertise in applying molecular biology to research problems within the themes emphasized by our Department.

Applications should be sent to Dr. James L. McGaugh, Chair, Department of Psychology, University of California, Irvine, CA 92717. To insure consideration, applications should be submitted prior to March 15, 1988.

*UCI is an Affirmative Action/Equal Opportunity employer.*

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**Postdoctoral Fellow**
Cardiovascular & Renal Pharmacology

Syntex, an international leader in the pharmaceutical and healthcare industry, has an outstanding opportunity for a Postdoctoral Pharmacist interested in cardiovascular and renal pharmacology.

You will perform basic research and study the effects of various new potential therapeutic agents on cardiac and renal function. The project will include studies in which cardiovascular hemodynamic and functional parameters will be assessed. This position requires a PhD in pharmacology or physiology with specialized coursework in cardiovascular and/or renal pharmacology.

Our laboratory offers the proper environment in which to study the effects of new therapeutic agents with state-of-the-art technology, and the opportunity to interact with a multidisciplinary group of scientists. Publication of results is highly encouraged.

Other positions currently available for BS/MS Biologists/Biochemists/Chemists.

For immediate consideration, interested candidates should send a resume to: Syntex, Professional Staffing, Dept. KHS, 3401 Hillview Avenue, Palo Alto, CA 94304. We are an equal opportunity employer.

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**Molecular Genetics**

Pfizer, a U.S. based multinational pharmaceutical company, is seeking scientists for its Molecular Genetics research group in Groton, Connecticut. We are looking for individuals with a strong background in molecular biology who are interested in applying their skills to exploratory biomedical research.

You should possess a MS or BS degree and have significant laboratory research experience. Applicants should be skilled in basic recombinant DNA techniques and have additional experience in one or all of the following:

- Mammalian (or insect) cell culture
- mRNA isolation, cDNA library construction/characterization
- Eucaryotic transcription regulation methodology

Pfizer offers a stimulating scientific research environment with the opportunity to interact with researchers from several other disciplines. In addition, Pfizer has an extremely competitive compensation/benefit package along with relocation assistance to this southeastern Connecticut shoreline community. Please send a resume, a description of your research experience, and names of three references to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

*An equal opportunity employer*

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**State University of New York at Stony Brook**

**Two Assistant Professorships**

**Molecular Immunology**

The Department of Pathology at SUNY Stony Brook invites applications for two state-supported, tenure track (calendar year) positions in the general area of Molecular Immunology. Candidates will be expected to carry out an independent research program utilizing molecular approaches to analyze immunological problems. Areas of interest include, but are not restricted to: T-cell receptors, immunoglobulin genes, cytokines, B-cell activation and MHC.

A PhD degree and at least 2 years of postdoctoral research experience are required. Candidates should be able to describe plans for future research activities. The candidates will participate in the training of graduate students and in departmental teaching.

Applicants should send curriculum vitae, a statement of research interests and goals, with names of 3 references to: Gail S Habicht, PhD, Immunological Search Committee, Department of Pathology, SUNY Stony Brook, Stony Brook, NY 11794-8691. SUNY Stony Brook is an affirmative action/equal opportunity educator and employer. AX# 19C.
ASSISTANT/ASSOCIATE PROFESSOR, MOLECULAR MICROBIOLOGISTS

The Department of Microbiology and Immunology, Louisiana State University Medical Center, Shreveport invites applications for one or more full-time, tenure-track positions in molecular microbialist. The position is part of a group of postdoctoral associates, graduate students and faculty who are studying molecular microbiology. Teaching responsibilities will include the immediate supervision of both graduate students and upper-division undergraduate students. Applicants must have a Ph.D. in molecular microbiology or a related field. Please include a current curriculum vitae, a statement of research interests, reprints, and three reference letters to: Chair, Microbiology and Immunology, 3500 Kato, Shreveport, LA 71130-3972.

Closing date is 1 June 1988. Deadline for applications is 1 May 1988.

Dr. Dennis J. O’Callaghan
Professor and Head
Department of Microbiology and Immunology
Louisiana State University Medical Center
1501 Kings Highway, P.O. Box 33932
Shreveport, LA 71130-3972

Affirmative Action/Equal Opportunity Employer

ASSOCIATE/ASSOCIATE PROFESSOR AND ASSISTANT/ASSOCIATE NEMATOLOGIST

Available 1 July 1988, an 11-month, tenure-track position as assistant/associate professor and associate/nematologist in the Agricultural Experiment Station. Research, teaching, and student advising responsibilities in developing and teaching integrated management techniques for plant-parasitic nematodes in crop systems. Appoints should also have basic research skill in the cellular, tissue or whole-plant level. Applicants should have a Ph.D. and experience in host-parasite relations, plant pathology, entomology, and nematology, are required, with a record of research productivity. Application deadline: 1 May 1988. Send curriculum vitae, statement of research and teaching interests relative to applying expertise in nematology, official undergraduate and graduate transcripts, reprints of relevant publications and submitted manuscripts, names, and addresses of at least three references to: Dr. Howard Ferris, Search Committee Chair, Department of Nematology, University of California, Davis, CA 95616. Telephone: 916-752-6905. The University of California, Davis is an Equal Opportunity/Affirmative Action Employer.

Dr. R. J. Brown
Chair, Search Committee
Department of Nematology
University of California
Davis, CA 95616

Affirmative Action/Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSOR, IMMUNOLOGY

The University of Texas Southwestern Medical Center at Dallas is an Equal Opportunity/Affirmative Action Employer. Applications are invited for a postdoctoral position in the Department of Immunology. The position is for two years and will start on 1 May 1988. The University of Texas Southwestern Medical Center at Dallas has a highly productive environment for research and training in immunology. The successful candidate will be expected to design an independent program of research in Immunology and to publish results in appropriate journals. The appointment will be renewed for a second term after a complete review of the program. Applications are encouraged from candidates with recent postdoctoral experience with a strong record of productivity in an area of Immunology. The University offers an annual salary of $34,000, plus benefits. The appointment will include the opportunity for career development and for research in areas that are currently active at the Immunology Laboratory. Please send a letter of application, a current curriculum vitae, and three letters of reference to: Dr. R. C. Williams, Department of Immunology, 5323 Harry Hines Boulevard, Dallas, TX 75235-9052. The University of Texas Southwestern Medical Center at Dallas is an Equal Opportunity/Affirmative Action Employer.

Dr. R. C. Williams
Chair, Department of Immunology
University of Texas Southwestern Medical Center
Dallas, TX 75235-9052

Affirmative Action/Equal Opportunity Employer

Dr. W. A. Miller
Chair, Department of Immunology
University of Texas Southwestern Medical Center
Dallas, TX 75235-9052

Affirmative Action/Equal Opportunity Employer

ASSOCIATE/FULL PROFESSOR, PHARMACEUTICS

College of Pharmacy and Allied Health Professions
Wayne State University
Applicants are invited for a full-time, tenure-track position in the Department of Pharmaceutical Sciences; rank and salary commensurate with qualifications. A Ph.D. in pharmaceuticals or a related discipline is required preferably with a professional degree in pharmacy. Postdoctoral experience is desirable. The candidate should have a strong background in physical pharmacy, biopharmaceuticals, or pharmaceutics and preferably have research experience in the area of drug delivery systems. Responsibilities will include teaching undergraduate and graduate courses, the development of a strong research program, and seeking external grant and contract support. Eligibility is limited to U.S. citizens and permanent residents. Qualified candidates should send curriculum vitae and three letters of reference to: Dr. H. W. E. Klaassen, Dean, School of Pharmaceutical Sciences, Wayne State University, Detroit, MI 48202. Wayne State University is an Affirmative Action/Equal Opportunity Employer.

Dr. H. W. E. Klaassen
Dean, School of Pharmaceutical Sciences
Wayne State University
Detroit, MI 48202

Affirmative Action/Equal Opportunity Employer

Clemson university
ASSOCIATE DEAN/DIRECTOR AGRICULTURAL RESEARCH AND SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Seeking a person who works well with people, identifies problems, has the initiative and know-how to identify funding sources, and assists department heads and faculty in the development of programs. Applicants with tenure will be considered in an appropriate academic department. Should have a record of research productivity shown by publication in refereed scientific journals, and success in securing grants and/or other outside funding and a doctorate in the natural sciences with at least 5 years of experience. Letters of nomination should include a brief statement of background and qualifications. Applications should include a cover letter and detailed résumé. References will be requested for final candidates. Deadline is 31 March 1988, but applications will be considered until the position is filled. For further information, please contact Dr. L. E. J. Hedges, Dean, College of Agriculture, Clemson University, 306 University Hall, Clemson, SC 29634. Telephone: 803-656-4018. Confidentiality will be honored upon request. An Affirmative Action/Equal Opportunity Employer.

Dr. L. E. J. Hedges
Dean, College of Agriculture
Clemson University
Clemson, SC 29634

Affirmative Action/Equal Opportunity Employer

Positions Open

ASSISTANT PROFESSOR, University of Texas Southwestern Medical Center at Dallas. M.D. degree. Salary: approximately $60,000 per year. Department of Clinical Neuroradiology (tenure-track). Department of Internal Medicine (clerkship). Must be eligible for Texas license to practice medicine. Minimum 2 years of postdoctoral experience in clinical investigation (lipoxygenase metabolism or diabetes). Responsibilities include direct patient care (Internal Medicine and Diabetes/Lipid Clinics). Clinical investigators involving lipoxygenase metabolism and/or diabetes mellitus. Teaching undergraduate nutrition students in the Department of Clinical Nutrition and developing postgraduate program in that department. Please address inquiries and curriculum vitae to: Dr. Scott M. Grunin, 5323 Harry Hines Boulevard, Dallas, TX 75235-9052. The University of Texas Southwestern Medical Center at Dallas is an Affirmative Action/Equal Opportunity Employer.

Dr. Scott M. Grunin
Chair, Department of Clinical Nutrition
University of Texas Southwestern Medical Center
Dallas, TX 75235-9052

Affirmative Action/Equal Opportunity Employer

Behavioral Neuroscientist—Ohio State University Psychology Department announces a tenure-track assistant or associate position for fall 1988. Individual will become an integral part of the psychobiology program and must interface with a multidisciplinary cognitive focus. Research could address electrophysiological, anatomical, or pharmacological bases of learning, memory, or information processing, and mechanisms of drug abuse, addiction, a statement of research interests, reprints, and three reference letters to: Chairman, Psychology Department, 100 West 18th Avenue, Columbus, OH 43210. Deadline is 14 March 1988. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

Dr. William M. Pardridge
Chair, Department of Psychology
Ohio State University
Columbus, OH 43210

Affirmative Action/Equal Opportunity Employer

Biochemistry Postdoctoral Position

The Blood-Brain Barrier Laboratory of the UCLA Brain Research Institute has several positions available now or in the near future in the field of neuroepidemiology. Applicants should have training in biochemical techniques. Send curriculum vitae and letters of reference to: Dr. William M. Pardridge, Chairman, Department of Physiology, UCLA School of Medicine, Los Angeles, CA 90024.

Cancer Research Scientist

The Roswell Park Memorial Institute (RPMI) NMR Program has an immediate opening for a scientist in the area of Nuclear Magnetic Spectroscopy. The preferred candidate should have a Ph.D. in chemistry or a related area. The individual should have utilized high-field NMR spectroscopy and have experience in 1-D and 2-D high resolution NMR spectroscopy. The successful candidate will assist staff scientists in designing specific NMR experiments; execute NMR experiments on the spectrometers; process and interpret NMR data and perform minor spectrometer maintenance. Send resumes to: Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263. Attention: Employment Office. RPMI is an Equal Opportunity Employer.

Yale University School of Medicine
Chair, Department of Psychiatry, Yale Medical School invites nominations for the position of Chair of the School's distinguished Department of Psychiatry. Candidates must be qualified for faculty appointment at the rank of full professor; it is desirable that the candidate have been a recognized leader in the field with proven abilities as a clinician, scholar, teacher, and administrator. Appointment will be effective 1 July 1988 or as soon as possible. Applications should be submitted prior to 19 March 1988. Qualified women and minority group members are especially encouraged to apply. Curriculum vitae and a bibliography should be sent to: Stephen G. Waxman, M.D., Ph.D., Chairman, Psychiatry Search Committee, Department of Neurology, LCI 707 PST, Yale Medical School, 383 Cedar Street, New Haven, CT 06510. Affirmative Action/Equal Opportunity Employer.

Chairman. McMaster University invites applications or nominations for the Chair in the Department of Biomedical Sciences. The term of this appointment is 5 years, renewable once. The Chair is available after 1 July 1988, requires a successful scientist with administrative experience in a university setting and a strong commitment to academic goals. The Chair of this department will have expertise encompassing the three divisions of neuroscience, anatomy, and experimental morphology, and physiology and pharmacology. The Chair is responsible for ensuring that the academic disciplines in the undergraduate and graduate programs of the faculty, relevant to the programmes and facilities of the Neuroscience Institute, are of the highest quality. In accordance with Canadian immigration requirements, the advertisement is open to Canadian citizens and permanent residents of Canada. Applications and/or nominations, accompanied by a detailed curriculum vitae and names of three referees, should be directed to: W. S. MacLeod, Dean, Faculty of Health Sciences, McMaster University, 1200 Main Street West, Hamilton, Ontario, L8N 3Z5 Canada.
IMMUNOLOGY RESEARCH BS/MS

The Upjohn Company, a leader in the research and development of pharmaceuticals, is seeking candidates to fill a position in our Infectious Diseases Research Group. Candidates will have a BS or MS in biochemistry, immunology or related discipline. Solid academic achievement, several years of successful laboratory experience, and demonstrated ability to do independent research are necessary.

This position will participate in the development and application of systems to study agents that affect the synthesis/release and biological activity of monokines and cytokines as well as systems to study the phagocytic killing of microorganisms. Experience and background with small animals, cell cultures, immunosassays and/or bacteriological techniques are highly desirable.

We are located in Kalamazoo in Southwestern Michigan, midway between Chicago and Detroit, offering varied cultural events, cosmopolitan shopping and entertainment. Lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary, comprehensive benefits and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600 ext. 3-6767 (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to position number 21707-A when calling. We are an Equal Opportunity Employer M/F.

Our Commitment to Scientific Excellence Continues...

RESEARCH SCIENTIST

Bristol-Myers Company currently has two career opportunities for Research Scientists within Pharmaceutical Research and Development.

Molecular Biologist

This scientist will design and conduct experiments to define important biochemical targets in skin cells, and to develop probes to measure such targets. These will be used to assay drug effects on skin function and to predict clinical effects of new dermatologics.

The successful candidate will have strong interpersonal skills and the ability to manage multiple and diverse projects. A Ph.D. in Molecular Biology or related field is required with 1-3 years experience or more.

Cell Biologist/Immunologist

The Research Scientist will conduct research on immune cells, cutaneous cells and their interaction in health and disease. The research goals of this position will lead to the discovery of new drugs, which will treat inflammation or alleviate cutaneous disorders.

The successful candidate will have a Ph.D. in Cell Biology, Immunology, or a related field. with 0-3 years experience, and strong written and verbal communication skills.

These positions offer high visibility within Bristol-Myers and a unique opportunity to work in scientifically exciting innovative programs. A very attractive package of salary and comprehensive benefits is offered.

For confidential consideration, please send resume and position requirements to:

Manager, Human Resources

Bristol-Myers Company
Pharmaceutical R&D Division
100 Forest Avenue, Buffalo, N.Y. 14213
An Equal Opportunity Employer M/F/H/V
POSITIONS OPEN

CHIEF OF DEPARTMENT OF BREAST SURGERY

RIVERSIDE MEMORIAL INSTITUTE

BUFFALO, NEW YORK

The Roswell Park Memorial Institute is seeking a Chief of the Department of Breast Surgery who will have responsibilities for the administration of the department and the treatment of breast cancer.

The candidate must be Board-certified in general surgery, have strong qualifications as an established research investigator in oncology and substantial academic credentials. The candidate must have an active appointment on the faculty of the SUNY at Buffalo School of Medicine and Biological Sciences. Apply by sending curriculum vitae, letter of interest, and names of three referees to: American Botanical Director, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263.

RPMI is an Equal Employment Opportunity Employer

CREW STATION DESIGN—This entry-level position will be responsible for advanced crew station design, subsystem integration including oxygen systems, environmental control systems, acceleration protection systems, and life support systems. Applicants must have U.S. citizenship and a degree in engineering. Please send resume to: Manager, Professional Staffing, McNeely Corporation, Box 4012, Department 62-R789, St. Louis, MO 63042. Equal Employment Opportunity Employer, M/F.

CURATOR OF MAMMALOLOGY

AMERICAN MUSEUM OF NATURAL HISTORY

The Department of Mammalogy invites applications for a tenure-track curatorial position to be available 1 September 1988. The successful applicant will be expected to pursue independent research in systematic mammalogy based on active fieldwork, use of the Museum's collection resources, and on such other laboratory and analytical approaches in which he or she may be competent (the specific techniques included, but are not restricted to, cytochemical, biochemical or morphometric analyses). Applicants must demonstrate an ability to apply systematic data in testing hypotheses of phylogenetic relationships, biogeography, evolutionary theory, or other areas of general biological interest. Curation of the Department's collections, participation on Museum committees and in the Museum's exhibition program, and membership in appropriate professional societies are other important requisites of employment. Interested applicants must have the ability or potential to assume the chairmanship of the Department of Mammalogy at some point in his or her career. All requirements for the Ph.D. must be completed by the date of appointment. Applications should include (i) a statement of research interests and professional goals; (ii) curriculum vitae; (iii) complete bibliography of publications, names, addresses, and telephone numbers of at least five persons familiar with the applicant's qualifications.

Applications should be submitted by 1 April 1988 to: Dr. Gay G. Musser, Chairman of Search Committee, Department of Mammalogy, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024. An Equal Opportunity Employer.

Cytogenetics Technologist

The Genetics and IVF Institute is a nationally recognized, integrated clinical and laboratory facility in the Washington, D.C. metropolitan area affiliated with a major teaching hospital and the Medical College of Virginia. The Institute is active in patient care, laboratory services, and research in genetics, reproductive medicine, and related fields. It has immediate and growing opportunities for individuals experienced in human cytogenetics. Applicants must have a B.S. or M.S. degree in biology, genetics, or a related field, plus immediate or in-progress experience in human chromosome analysis. Practical knowledge of amniotic fluid cell culture and/or chorionic villus methology is desirable. Application is desired. The Institute has established a stimulating environment which encourages professional growth. We offer a competitive salary and benefits package commensurate with experience and qualifications. Send resume to: Annette Titleman, Laboratory Director, Genetics and IVF Institute, 3020 Jaguar Road, Fairfax, VA 22031.

SCIENCE, VOL. 239 934

DEAN, FACULTY OF AGRICULTURAL AND FOOD SCIENCES

BUFFALO, NEW YORK

The University of Denver invites applications for the position of Dean, Faculty of Agricultural and Food Sciences. The Faculty is one of five in the University; normal enrollment of 400 (one-quarter in graduate students) is expected for the 1987-1988 academic year. The University is located in Denver, Colorado, and prides itself on being in the heart of the Rocky Mountain West with only the Rocky Mountains to its west and north. A major part of the University's mission is to prepare its students for the world of work by providing a strong liberal arts education and courses in applied and technical fields of study. Applications are invited from qualified individuals for this position. All applications and nominations should be sent to: Search Committee, Faculty of Agricultural and Food Sciences, University of Denver, 2150 S. Grant Street, Denver, CO 80208. The University of Denver is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, BIOMEDICAL AND HEALTH CARE ETHICS

The Director will report to the Provost, and will provide leadership in biomedical and health care ethics for the Health Sciences Center and to some extent, Statewide. He or she is to develop effective interactions among the faculty and students of the colleges of medicine, nursing, dentistry, pharmacy, allied health and public health, and in the clinical setting of the affiliated hospitals; is expected to be active in scholarly work and research concerned with biomedical and health care ethics, and to develop conferences and elective curricula in ethics for medical and other health professional students. Applicants must have at least a Ph.D. or the equivalent in philosophy or extensive relevant scholarly achievement, successful experience in the clinical setting, established scholarship and teaching effectiveness, and the seniority which would be desirable for one who is to develop a new program on a health sciences campus. The appointment will be as an associate professor with an adjunct or joint appointment in the Department of Philosophy. Salary is dependent upon qualifications. Preferred starting date will be Fall of 1988.

Applicants should send a cover letter and curriculum vitae to: Ethics Search Committee, Office of the Provost, The University of South Florida, Health Sciences Center, P.O. Box 25901, Oklahoma City, OK 73190, or on preferably before 30 March 1988. The University of South Florida is an Equal Opportunity/Affirmative Action Employer.

ENVIRONMENTAL CHEMISTRY

FACULTY POSITION

The Department of Preventive Medicine and Environmental Health of The University of Iowa College of Medicine invites applications for a tenure-track faculty position at the assistant professor level. Applicants holding the Ph.D. degree in one of two areas will be considered: (i) analytical chemistry of environmental pollutants and industrial toxicants or (ii) environmental engineering/science with specific environmental chemistry laboratory experience and training in analysis and chemical monitoring of pollutants in the environment. The University of Iowa is the major center for the study of environmental contaminants and chemical monitoring and analysis in the Midwest. Applicants should send a letter of interest, a complete curriculum vitae and a list of three references to: The Chair, Department of Preventive Medicine and Environmental Health, College of Medicine, The University of Iowa, Iowa City, Iowa 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, CLINICAL CHEMISTRY—The Division of Laboratory Services at the Albany Medical Center, a 620-bed tertiary care facility and medical center, is soliciting applications for a position as Director of Clinical Chemistry. Candidates should hold a Ph.D. or M.D. degree and be Board certified or eligible in clinical chemistry. Essential clinical and administrative responsibilities include directing a large computerized clinical chemistry laboratory with a full range of speciality services, toxicology and immunodiagnostic services. A strong commitment to teaching and research is required and the successful candidate will hold appointments in the Departments of Biochemistry and Pathology, commensurate with professional experience. Please send curriculum vitae and three letters of recommendation to: Thomas G. Rossano, Ph.D., Laboratory Services, Albany Medical Center, 43 New Scotland Avenue, Albany, NY 12208.

DIRECTOR, GENEARETICAL RESEARCH, EDUCATION AND CLINICAL CENTER (GRECC), GAINESVILLE VA MEDICAL CENTER

PROFESSOR OR ASSOCIATE PROFESSOR

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE

We seek a distinguished academic physician with the background and potential to foster, as Director of the GRECC, the development of innovative, educational and clinical programs in gerontology. Although we welcome applications from any academic discipline, ongoing programs would relate best to an internist, especially one with interest in geropharmacology. Salary negotiable; anticipated start date as early as September 1988. Please send curriculum vitae and names of three references by 22 April 1988 to: Dr. Allen H. Neims, Box J-267, JHMHC, University of Florida, Gainesville, FL 32610.

An Affirmative Action/Equal Opportunity Employer.

ENZYMOLGY AND NEUROPHYSIOLOGY

POSTDOCTORAL AND DOCTORAL STUDENT POSITIONS are now available on:


Please send your curriculum vitae to: Hanford Phillips, Ph.D., 40th Street and 101st Avenue, City College Department of Chemistry, New York, NY 10031.

EUKARYOTIC MOLECULAR BIOLOGIST will work in a growth factor/oncogene field or molecular mechanism of immune regulation. Must have capacity to develop independent program. Level of position depends upon experience. Send curriculum vitae and names of three referees to: Gary Phillips, Ph.D., The Institute Director, Roswell Park Memorial Institute, Buffalo, NY 14263.
**Senior Scientist**

**Analytical Development Laboratory**

Schering-Plough, a $2.4-billion Corporation, has established a worldwide reputation for leadership in research, manufacture and marketing of pharmaceutical and personal care products.

We offer you an opportunity to join our Analytical Laboratory research team to participate in the development of protein separation projects, including improving gel procedures. You will also provide technical support to department scientists and engineers.

This is a hands-on position, requiring in-depth knowledge of electrophoresis, isoelectric focusing and protein blotting techniques.

Credentials must include a PhD in Chemistry, Biochemistry, or equivalent, plus 1-5 years’ laboratory experience in gel electrophoresis.

We offer an attractive salary and benefits package, and a stimulating high-support research environment. To explore this opportunity, forward your resume with salary history in confidence to: Mr. M. Urdanick, Schering-Plough Corporation, 1011 Morris Avenue, MD87-19, Union, NJ 07083. We are an equal opportunity employer.

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**Sr. Scientist/Section Leader Microbiology**

SANDOZ CROP PROTECTION CORPORATION, a company widely recognized for excellence in agricultural research and manufacturing, has an opening for a Microbiologist as Sr. Scientist/Section Leader in Biological Development. The function of this position will be to direct fermentation development for Microbial Insecticides. Requirements include:

* Ph. D. in Microbiology with minor in Biochemistry and/or immunology

* At least 5 years experience in Microbial physiology research with bacterial cultures and 2 years fermentation process development.

* Skills in modern biotechnology techniques desired.

For consideration send resume to:

SANDOZ CROP PROTECTION CORP.
Denise Wiley
P.O. Box 220
Wasco, CA 93280

EEO/AA

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**SENIOR SCIENTIST**

**Toxicokinetics**

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for a senior scientist position in the Department of Biochemical Toxicology.

Qualified applicants should have a doctoral degree in pharmacology, toxicology, or related areas with experience in pharmacokinetics, drug disposition, and a general background in toxicology; post-doctoral training is preferable, but not essential. The primary responsibilities will involve support of the preclinical toxicologic evaluation of new therapeutic agents through the design, conduct, and evaluation of toxicokinetic studies. These studies will be directed toward providing insights into mechanisms of toxicity, dose selection, and the effects of pathophysiological changes on drug disposition.

Qualified candidates should send detailed curriculum vitae to:

Ms. Carol Zapapas
Personnel Representative—GB992
Eli Lilly and Company
Greenfield Laboratories
P.O. Box 708
Greenfield, IN 46140

An Equal Opportunity Employer
U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS) DIRECTOR, Animal National Disease Center Ames, Iowa. ARS is seeking a person who will participate with the area directors in the management of basic research planning, coordinating, and evaluating overall research programs. Candidates must have knowledge and experience in one or more of the following areas: (i) veterinary medicine, pathology, virology, physiology, cytology, molecular biology, and chemistry as related to animal disease research; and (ii) cooperative programs directed toward agricultural research needs, including federal and state agencies, and private industry. This is an SES position, therefore, in addition, this position also requires managerial experience in program/policy issues, development and administration.

Ph.D. is desirable, must be a U.S. citizen. Salary is commensurate with experience ($46,594 to $77,500). For information on the research program and position, contact: Dr. Gerald Carlson on 309-685-4011 ext. 683. For information, application procedure, and required forms, contact: James Carr on 303-844-2756. Applications in response to this advertisement should be received by 23 March 1988. Mailing address: USDA, Agricultural Research Service, Office of Applications Branch, Northern Section, Building 419, BARC-East Beltsville, MD 20705 Attention: Janie E. Carr An Equal Employment Opportunity.

FACULTY POSITION IN BIOCHEMISTRY

Tenure-track position in the Department of Chemistry. Applicants will be considered at all ranks. Ph.D. and postdoctoral experience required. Position is open in any area of biochemistry or molecular biology. The successful applicant will be expected to establish or continue a vigorous, externally funded research program and participate in undergraduate and graduate (M.S. and Ph.D.) programs. Opportunities available for collaboration with other departments, major area hospitals and biotechnology companies. Submit curriculum vitae, an outline of research plans and arrange for three letters of recommendation to be sent. All applications must be received by 21 March 1988. Contact: Professor Denis Callewaert, Department of Chemistry, Oakland University, Rochester, MI 48309. Oakland University is an Equal Opportunity/Affirmative Action Employer.

THE UNIVERSITY OF CALGARY FACULTY POSITION IN VISION RESEARCH

The University of Calgary Faculty of Medicine invites applications for a position as assistant or associate professor of medical physics with specialization in physiologic and biophysics of vertebrate photoreceptors. Candidates should have Ph.D. or M.D. with equivalent research training, at least 2 years postdoctoral experience, and an established record of productive and fundable research on photoreceptors. The successful candidate will be expected to establish an affiliation with Alberta Heritage Foundation for Medical Research for salary and establishment support. A Faculty appointment in the Department of Medical Physiology will also involve an affiliation with the Lions' Sight Centre. The applicant will be expected to develop a strong research program in an interdisciplinary setting and will be expected to devote 75% of time to research.

In accordance with Canadian immigration requirements, this position is open to Canadian citizens and permanent residents of Canada. Please send curriculum vitae, summary of research interests, and names of three referees prior to 15 April 1988 to: Dr. William K. Stell Director, Lions' Sight Centre The University of Calgary Department of Medicine 3330 Hospital Drive N.W. Calgary, Alberta T2N 4N1 Canada.

EUKARYOTIC GENETICIST—A tenure-track position is to be filled at the assistant professor level. Duties include teaching an undergraduate course in genetics, one or more intermediate courses, and maintaining a vigorous extramurally funded research program that includes graduate students. All areas of eukaryotic genetics in plants or animal systems, including molecular, developmental and evolutionary genetics. Applicants with postdoctoral experience should send curriculum vitae and list of at least three references to: Dr. A.R. Wolpert, Department of Biological Sciences University of Idaho Moscow, Idaho 83843-1707.

The University of Idaho is an Equal Opportunity/Affirmative Action Employer; women and members of minority groups are particularly encouraged to apply.

The Scientists Center for Animal Welfare (SCAW), a well-established nonprofit educational organization, seeks an EXECUTIVE DIRECTOR. Requirements include a Life Science Doctorate, organizational and program management skills, knowledge of animal-use and experimentation issues, and ability to initiate and manage fund-raising programs. Submit letter, curriculum vitae, and names/addresses of three references to: S. Bloom, M.L. Rankin, SCAW, 4805 St. Elmo, Bethesda, MD 20814.

FACULTY POSITION IN NEUROBIOLOGY COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

The Department of Biological Sciences of Columbia University invites applications for a position in neurobiology at either the junior or senior level. Outstanding applicants working in any area of neuroscience will be considered, although emphasis will be placed on cellular and/or developmental neurobiology are particularly encouraged to apply. Additional research programs in the department include the areas of morphogenesis, molecular and cellular biology, molecular genetics, and developmental biology. Applicants should have a Ph.D. and have completed postdoctoral research training. The successful candidate must have a strong commitment to undergraduate and graduate teaching. The level of appointment made will be commensurate with experience. Curriculum vitae, list of publications, a description of current and future research, and three letters of recommendation should be sent to: Dr. Darcy Kelley, Neurobiology Search Department of Biological Sciences 600 Fairchild Center New York, NY 10027 Columbia University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS IN CELLULAR AND MOLECULAR PHYSIOLOGY

The Department of Physiology of The Pennsylvania State University College of Medicine is seeking applications for two full-time, tenure-track positions at the assistant/associate professor rank to begin in summer or fall 1988. The Department presently has eight full-time, well-funded faculty who are working in the general area of cellular and molecular physiology. We are seeking candidates with substantial postdoctoral experience in one or more of the following areas: metabolic regulation, mechanisms of hormone action, membrane receptors, cytoskeletal-membrane interactions in cellular membrane traffic, signal transduction, ion channels, control of growth and differentiation, and gene regulation. Special attention will be given to candidates who are able to relate their own research to the cell and tissue levels of the organism. Significant research accomplishment and ability to obtain independent funding are essential. The Department is committed to research, teaching and service. Information about the Department can be obtained by writing to: Dr. John Frenz, Department of Physiology, Penn State University College of Medicine, P.O. Box 2850, Hershey, PA 17033. The Pennsylvania State University is an Equal Opportunity/Affirmative Action Employer.

INDUSTRIAL HYGIENE FACULTY POSITION

The Department of Preventive Medicine and Environmental Health of The University of Iowa invites applications for a tenure-track faculty position at the assistant professor level. Applicants with a degree in industrial hygiene or an equivalent closely related field will be considered. It is desirable that the applicant have focused experience in one or more specialized aspects of industrial hygiene compatible with the research and programmatic interests of the Division of Occupational and Environmental Health. Salary will depend upon academic background, evidence of scholastic achievement, and experience. Please send curriculum vitae and a description of research interests to: Dr. R. Brown, Director, Department of Preventive Medicine and Environmental Health University of Iowa 150 E. Market Street Iowa City, IA 52242.

Applicants should include: curriculum vitae, names of three references, and summary of research interests. Applications will be accepted until the position is filled. For further information, please contact: Dr. R. Brown, 150 E. Market Street, Iowa City, IA 52242. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.

OHIO STATE UNIVERSITY College of Veterinary Medicine FACULTY POSITION MOLECULAR BIOLOGIST

Applications are invited for a tenure-track (assistant professor) position in molecular biology at the University of Houston—Clear Lake beginning August 1988. The successful candidate will teach at the advanced undergraduate and graduate (M.S.) level, including laboratories, and will be expected to establish an independent research program. The Ph.D. in molecular biology or a related field is required; postdoctoral experience is desirable. The University of Houston—Clear Lake, one of four institutions in the University of Houston system, is a growing, upper-level University located near NASA's Johnson Space Center. Candidates should send curriculum vitae, a brief description of research interests, and arrange to have three letters of recommendation sent by 15 March 1988 to: Dr. Margaret R. Kaschak, Chair, Division of Biological and Health Sciences, University of Houston—Clear Lake, Houston, TX 77058. The University of Houston—Clear Lake is an Equal Opportunity/Affirmative Action Employer.

Ozark State University's Laboratory for Artificial Intelligence (LAIR) invites people with strong backgrounds in cognitive science, a Ph.D., and advanced training in computer science to apply for FACULTY POSITIONS in the Department of Computer Science. Areas of emphasis will be computational theory issues surrounding AI models including connectionist models, computational aspects of analog and symbolic reasoning, and speech understanding, and knowledge-based problem solving. Cognitive science studies, with participation by computer and information science, and cognitive psychology programs, among others, are to be supported; a senior appointment as Director of Cognitive Science is possible. Candidates should send curriculum vitae, reprints, a description of backgrounds and interests, and names of at least three referees to: Dr. B. Chandrasekaran, Director of LAIR, Department of Computer and Information Sciences 2036 Bell Avenue Columbus, OH 43210-1277

THE University of Iowa invites applicants for a position in the Division of Occupational and Environmental Health.

Salary will depend upon academic background, evidence of scholastic achievement, and experience. Please respond with curriculum vitae and the names of three references to: William Popezendorf, Ph.D., CCIH, The University of Iowa—AMRF, Iowa City, IA 52242.

Attention: Recruiting Assistant. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

LIMNOLOGIST/AQUATIC BIOLOGIST CENTER FOR LIMNOLOGY AND DEPARTMENT OF ZOOLOGY UNIVERSITY OF WISCONSIN-MADISON

Assistant or associate professor. One-half of the position derives from funds contributed to the Center for Limnology by the Norman Bassett Foundation and the remainder is to a major contract on the Madison lakes. The other 50% is a teaching and research appointment in the Department of Zoology. Teaching opportunities are negotiable. Send curriculum vitae and a statement of research interests, reprints, and names of five references to Dr. James F. Kelly, Center for Limnology, 777 West Madison Street, Madison, WI 53706. Applications due 31 March 1988. The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.
MOLECULAR PARASITOLOGISTS AND MOLECULAR VIROLOGISTS
FOR
INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY,
NEW DELHI, INDIA

The International Centre for Genetic Engineering and Biotechnology (ICGEB) is an intergovernmental organization being established by 40 countries as a centre of excellence devoted to the application of genetic engineering and biotechnology to accelerate economic development. The United Nations Industrial Development Organization (UNIDO) assists the member countries of the ICGEB in establishing the Centre and is currently implementing an interim programme for a period of three years by which the Centre is expected to function as an autonomous intergovernmental organization.

At New Delhi, India, the initial focus is on the molecular aspects of hepatitis virus and parasitology, with special emphasis on protozoan infections.

The Centre is under the directorship of Prof. Ivra C. Gunsalus. The New Delhi component is under the directorship of Prof. K. K. Tewari. Positions are now available as follows:

Research scientists

Research scientists are being recruited at levels from Assistant to Senior Scientist with equivalence to academic attainment of Assistant to full Professor at major internationally recognized universities. Fluency in English is essential. The levels of appointment and the salary will be commensurate with academic excellence, experience and demonstrable leadership.

Please send resume with three letters of recommendation to:

Prof. I. C. Gunsalus
P.O. Box 130
UNIDO
Vienna A-1400, Austria

POSTDOCTORAL SCIENTIST
EXPLORATORY RESEARCH

Amgen is a dynamic and growing organization that is a recognized leader in recombinant DNA technology. Our leadership in developing erythropoietin and other products for human therapeutics, human diagnostics, animal health care and specialty chemicals has placed us firmly in the forefront of the industry. We currently have an opportunity for a Postdoctoral Scientist to contribute to our Exploratory Research Group.

Qualified candidates will have a Ph.D. in the avian molecular biology of growth physiology or disease resistance or a Ph.D. in the mammalian molecular biology of lipid metabolism, hematology, endocrinology or immunomodulators.

Amgen offers a stimulating and challenging research environment as well as an attractive location (about an hour north of Los Angeles). Amgen also offers a competitive compensation and benefits package. Qualified applicants should send a resume, in confidence, to:

Recruitment, Dept. #113
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal Opportunity Employer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

OPENING DATE: January 18, 1988

(All applications must be postmarked before closing date)

Position: Director, Division of Digestive Diseases and Nutrition

The National Institute of Diabetes and Digestive and Kidney Diseases invites nominations and applications for the position of Director, Division of Digestive Diseases and Nutrition (DDN). The candidate must be internationally recognized within the scientific community as an authority in digestive diseases. In addition, the candidate should demonstrate an interest and a commitment to nutrition research. This institute conducts, fosters, and supports research and research training in the prevention, management, and cure of diabetes and related endocrine and metabolic diseases; kidney, urologic and hematologic diseases, and digestive diseases and nutrition. Programs encompass intramural laboratory research and extramural (grants and contracts) activities in fundamental diabetes digestive and kidney disorders.

The incumbent serves as the primary official with responsibility for planning and executing the institute’s digestive diseases and nutrition extramural programs. This includes basic and applied research, training fellowships, institutional training awards, multipurpose research centers, clinical trials, and data collection. Advises and participates with the outside voluntary health organizations and the National Advisory Council in identifying and accessing the needs and requirements for research and manpower development in the digestive diseases and nutrition disorders. Additionally, the incumbent serves as principal advisor to the Institute Director on matters and policies pertaining to these areas. Also, the incumbent will conduct intramural research projects in the areas of digestive related diseases and nutrition.

This is a Civil Service position in the Senior Executive Service (SES), with a salary range from $84,700 to $73,400 per annum, depending on qualifications. Currently, the salary is limited to $73,400. Physicians may be eligible for an additional comparability allowance up to $10,000 per year. (Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service). Mandatory professional/technical qualifications are a medical degree and research program administration and/or clinical experience in digestive diseases and nutrition. Further information on these qualifications are available by contacting Mr. Syd Carter, Personnel Management Specialist, National Institute of Diabetes and Digestive and Kidney Diseases, 9000 Rockville Pike, Building 31, Room 9A30, Bethesda, Maryland 20892, (301) 496-4231.

Mandatory managerial/executive qualifications include evidence of management of a basic or clinical research program, demonstrating ability to assume leadership responsibilities in developing program goals; representing the program to outside groups; directing program planning, execution, and evaluation; and conducting a fair and equitable employment program, including the attainment of EEO objectives.

Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the degree to which they exceed the mandatory managerial/executive qualifications, and on the following desirable qualifications: scientific reputation/peer recognition, training and education, leadership of a basic or clinical research or research administration program, and honors and awards.

APPLICATIONS (APPLICATION FOR FEDERAL EMPLOYMENT SF-171) should be sent to Mr. Clifford Moss, Executive Secretary, Search Committee for Director, DDN, Building 31, Room 9A30, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, Maryland 20892, telephone (301) 496-4231.

A current curriculum vitae and bibliography must accompany all applications. Applications from women and/or minority group members are especially solicited.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER
POSITIONS OPEN

THE UNIVERSITY OF CALGARY
GRADUATE AND POSTDOCTORAL
RESEARCH IN BIOCHEMISTRY

The University Biochemistry Group is comprised of members of the Faculties of Medicine and Science and offers an interdisciplinary environment for graduate and postdoctoral research in biochemistry, molecular biology and biochemical, molecular, and cell biology. The group is engaged in research ranging from biomembrane biochemistry to the study of cellular and skeletal muscle function. For additional information, interested individuals should contact Dr. Kenneth J. Stevenson, Chairman, Graduate Studies Committee, University Biochemistry Group, Department of Biological Sciences, The University of Calgary, 2500 University Drive NW, Calgary, Alberta, Canada T2N 1N4.

MCBIOLOGIST

Microbiologist (Ph.D. preferred) to direct Section of Clinical Laboratories, Minnesota Department of Health, on University of Minnesota Minneapolis Campus. Develop program in epidemiological investigation. Expertise in virology, particularly retrovirology an asset; 2 to 3 years of supervisory experience required. Salary: $30,000-$35,000. Contact: L. Curtiss Harris, Personnel Director, Minnesota Department of Health, 717 Delaware Street, SE, Minneapolis, MN 55440.

HEAD, DEPARTMENT OF BIOCHEMISTRY AND DIRECTOR, CENTER FOR BIOMOLECULAR CHEMISTRY

UNIVERSITY OF NEBRASKA—OMAHA

Applications, nominations, and inquiries are invited for the dual-position of Head of the Department of Biochemistry and Director of the University-wide Center for Biological Chemistry. The Department is part of the Institute of Agriculture and Natural Resources and has a state- and federally funded research mission in the Nebraska Agricultural Research Division. The undergraduate and graduate teaching programs in biochemistry are administered by the newly created Center and are offered in the College of Arts & Sciences and the College of Agriculture.

Responsibilities include the dynamic and innovative leadership of biochemistry programs at UNL by administering and participating in the research mission of the Department of Biochemistry and directing the undergraduate and graduate teaching programs of the Center for Biological Chemistry. Appointment will be at the full professor level; salary is competitive and based on qualifications and experience. A Ph.D. or equivalent is required, as is an outstanding biochemistry record commensurate with interest and experience in teaching biochemistry, and strong leadership ability and administrative potential.

Applications, nominations, and inquiries should be directed as shown below. Applicants should provide curriculum vitae and names, addresses, and telephone numbers of at least three references by 15 March 1988 to:

Dr. Raymond Chollet
Chair, Biochemistry Search Committee
210 Biochemistry Hall
University of Nebraska—Lincoln
Lincoln, NE 68583—0718
Telephone: 402-472-2936 or 472-2932

African American/Equal Opportunity Employer

POSITIONS OPEN

ISOTOPE GEOCHEMISTRY/
RICE UNIVERSITY,
GEOLOGY AND GEOPHYSICS

We are seeking a person with a promising research record in either Neandertal or Ar or Ar geochronology with applications to modeling tectonic processes, or in other radiogenic isotope studies including but not limited to radiocarbon dating. This is a one-year position, filling this position we plan to build on our active programs in petrology/volcanology, regional tectonics/structural geology, marine geochemistry, and global geochronology. In this position, the successful applicant will participate in the development of education programs in geochronology, and complementary fields, both graduate and undergraduate, will be an important task. This tenure-track appointment at the rank of assistant professor with the full salary of $32,000 is available upon competitive application to the Alberta Heritage Foundation for Medical Research and other granting agencies. Interested individuals should send curriculum vitae that includes courses taken and grades obtained, plus a statement of research interests to: Dr. Kenneth J. Stevenson, Chairman, Graduate Studies Committee, University Biochemistry Group, Department of Biological Sciences, The University of Calgary, 2500 University Drive NW, Calgary, Alberta, Canada T2N 1N4.

POSITIONS OPEN

MOLECULAR BIOLOGIST

POSTDOCTORAL OR RESEARCH ASSOCIATE position available at Tufts University to study the regulation of gene expression in mammalian cells. The research utilizes transgenic mice and transgenic bacteria to examine transcriptional regulation of genes. Experience in molecular biology, biochemistry, and genetics is required; salary is competitive. Beginning date 21 March 1988. Send curriculum vitae and names of two references to: Dr. Norman R. Alpert, Ph.D., Department of Biology, Tufts University, Medford, MA 02155.

UNIVERSITY OF VERMONT
MOLECULAR BIOLOGIST/BIOPHYSICIST

The Department of Physiology and Biophysics is seeking applicants for a tenure-track position at the level of assistant professor in the area of molecular genetics or molecular biophysics applied to basic physiological problems. The Department of Physiology and Biophysics is located on the campus of the University of Vermont in the College of Medicine. The department emphasizes basic research in the area of the cellular and molecular basis of biological functions. Department members are engaged in research and teaching in the areas of ion transport, sensory transduction, cardiovascular and renal physiology, and the physiological effects of hormones and neurotransmitters. The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Applications should send curriculum vitae along with a description of career goals, research objectives, and names of three references to:

Norman R. Alpert, Ph.D.
Department of Physiology and Biophysics
University of Vermont College of Medicine
Burlington, VT 05405

MOLECULAR GENETICIST

FACULTY POSITION at the University of Michigan—The Department of Ophthalmology, W. K. Kellogg Eye Center, is seeking an assistant, associate, or full professor for an immediate opening in molecular genetics to work in linkage and mapping studies of human and animal models of oculodysplasia. This position will complement a group having basic and clinical expertise in inherited retinal degenerations. In addition to seeking to fill the successful candidate will help to direct the existing linkage studies of X-linked human retinal dystrophies. A joint appointment in a related graduate department at the University of Michigan is possible. Curriculum vitae and a letter of interest, including a statement of research goals, should be forwarded to: Paul A. Sieving, M.D., Ph.D., Department of Ophthalmology, W. K. Kellogg Eye Center, University of Michigan, 1000 Wall Street, Ann Arbor, MI 48105. The University of Michigan is an Affirmative Action Employer.

MOLECULAR GENETICIST

The Division of Rheumatology, Department of Medicine, at the University of Colorado Health Sciences Center, invites applications for a position at the beginning assistant professor level. Applicants are expected to have at least 2 years of postdoctoral work with experience in the regulation of gene expression. The position is full-time, with an academic appointment at the rank of Instructor, with promotion dependent on productivity and service. Applicant should have a Ph.D. or equivalent and at least 3 years of research experience in molecular genetics. This person will be responsible for developing and implementing research related to human genome mapping and mechanisms of mutagenesis. The former requires skills in vector and library construction using plasmid, lambda, and cosmids vectors as well as DNA and protein sequencing. Additional experience in mutagenesis studies is required. A Ph.D. or equivalent is required, and at least 3 years of research experience in molecular genetics is required. Experience in the use of transgenic animals is highly desirable. This position requires skills in the use of transgenic animals, and experience in the use of retroviral vectors.

Send curriculum vitae to: Karl G. Morrell, Personnel Operations Division, Department KSC/BBH3B, Lawrence Livermore National Laboratory, P.O. Box 808, L-725, Livermore, CA 94550. An Equal Opportunity Employer.

MOLECULAR GENETICIST

M.D. or Ph.D.—W. K. Kellogg Eye Center, University of Michigan, is seeking an assistant, associate, or full professor for an immediate opening in molecular genetics to work in linkage and mapping studies of human and animal models of oculodysplasia. This position will complement a group having basic and clinical expertise in inherited retinal degenerations. In addition to seeking to fill the successful candidate will help to direct the existing linkage studies of X-linked human retinal dystrophies. A joint appointment in a related graduate department at the University of Michigan is possible. Curriculum vitae and a letter of interest, including a statement of research goals, should be forwarded to: Paul A. Sieving, M.D., Ph.D., Department of Ophthalmology, W. K. Kellogg Eye Center, University of Michigan, 1000 Wall Street, Ann Arbor, MI 48105. The University of Michigan is an Affirmative Action Employer.
DIONEX Corporation, the leader in the development of specialized HPLC systems, is seeking Biochemists to work on a major new product line.

RESEARCH BIOCHEMIST

This individual will be a part of the Life Science Group and contribute to the development of new products for analytical biochemistry.

Requirements: PhD or MS/BS in Biochemistry or related science and 2-4 yrs industrial research experience. Strong interest in Chromatography and Electrophoresis essential.

TECHNICAL SPECIALIST

BIOCHEMICAL LIQUID CHROMATOGRAPHY

Responsibilities: Develop new applications for Dionex columns and instrumentation; assist users of BioLC systems; provide technical support to sales, customer service and marketing personnel, and demonstrate the ability to solve separation problems using BioLC Series systems.

Requirements: PhD or MS in Biochemistry, Chemistry or related science plus 1-4 yrs experience in chromatographic separation of biochemical substances using HPLC and/or low pressure techniques.

Dionex offers a complete benefits package and the chance to participate in a new venture of a growing company! Please send resume to: Dionex Corporation c/o Human Resources; 501 Mercury Dr.; Sunnyvale, CA 94088. Principals only please. We are an equal opportunity employer m/f/v/h.

DIONEX

POSTDOCTORAL

MOLECULAR BIOLOGIST

We are seeking a highly motivated postdoctoral scientist to participate in the molecular biological efforts of our Alzheimer's Disease Program. This project interfaces the efforts of laboratories throughout our biotechnology program with those in our CNS Diseases Research unit. Some aspects of this work include genetic analyses, cDNA/gene cloning, expression of recombinants in a variety of cellular and transgenic systems, studies of post-translational modifications and metabolism of expressed proteins, in situ hybridization and immunohistochemical analyses. Interactions with experts in all these areas are available, providing strong opportunities for career growth and expansion of skills. Research publications and presentations at meetings will be encouraged.

The Upjohn Company is located in Kalamazoo, a mid-sized community in southwestern Michigan, midway between Detroit and Chicago. The region is surrounded by rolling hills, numerous lakes and woodlands. Kalamazoo provides immediate access to a wide variety of cultural and recreational pursuits, ranging from concerts and live theatre to a full range of summer and winter sports. Educational opportunities are available at several local universities and community colleges. Upjohn offers an outstanding package of salary and benefits in a community with an exceedingly reasonable cost of living.

If you are interested in a demanding position with significant growth opportunities in a rapidly moving field of research, please call toll free 1/800/253-8600, ext. 3-6767. (inside Michigan call collect 616/323-6767 to request an employment application be sent to you. Please refer to Ad Number 1787-F when calling.

An Equal Employment Opportunity Employer M/F
Our commitment to scientific excellence continues...

Upjohn

An Equal Opportunity Employer
Postdoctoral Fellow

Seeking a Postdoctoral Fellow to participate in the mutagenesis and mammalian cell expression of the envelope glycoprotein of the HIV-1 retrovirus within an ongoing collaborative project between Dr. Phillip Berman of Genentech, Inc. and Dr. Don Wiley of Harvard University.

Competence in recombinant DNA technology and an interest in protein structure are essential. Experience in protein chemistry and/or immunology is desirable. This grant funded position will be available in early 1988. It is anticipated that the great majority of time will be spent at Genentech, Inc. in South San Francisco with an opportunity to also spend time at Harvard University in Cambridge.

Please send a resume of educational background, experience and publications, with the names of three references to: Dr. Phillip Berman, Department of Molecular Biology and Immunology, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

Genentech, Inc.
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ASSOCIATE PROFESSOR OF TOXICOLOGY

The Department of Environmental and Community Medicine of the University of Medicine and Dentistry of New Jersey (UMDNJ)-Robert Wood Johnson Medical School is continuing to expand its Division of Toxicology. The Division has identified the need for research into the mechanisms of transplacental metabolism and bioavailability to enhance the breadth of the department.

The successful candidate should be recognized as a leader in the field of Toxicology with a record of substantial research; an ongoing NIH funded program; and an interest in training students in Public Health. The candidate will participate in the team teaching efforts of the Division, as well as have the opportunity to interact with established researchers in clinical toxicology, epidemiology, and exposure assessment. Preference will be given to candidates who have trained students in areas of toxicology of concern to the division. UMDNJ and Rutgers University have received funding to develop the Environmental and Occupational Health Sciences Institute. This Institute will be the focus for much of the Toxicology and Environmental Health research in New Jersey with research funded by federal, state, and private agencies.

Candidates can send curriculum vitae and the names of three references to: Dr. Michael A. Gallo, Department of Environmental and Community Medicine, UMDNJ-Robert Wood Johnson Medical School, (S), 675 Hoes Lane, Piscataway, NJ 08854-5635.

An equal opportunity/affirmative action employer M/F/H/V.

Molecular Biologist/Biochemist

New England Biolabs is seeking qualified professionals to join these active groups:

1. cloning, sequencing and overexpressing restriction and modification genes and parasitic antigens; and
2. purifying and characterizing restriction endonucleases.

You should have a BS or equivalent degree, and familiarity with recombinant DNA procedures or protein purification techniques. We encourage attendance at meetings, publication of research results and open communication with others.

Microbiologist/Fermentation Specialist

We are also in need of an experienced individual to work with 25-100 litre fermentations in a variety of microorganisms. Cell disruption and protein purification experience are helpful; a BS in Microbiology or a related field and good mechanical skills are essential.

New England Biolabs offers a generous salary and benefits package, as well as the opportunity to learn and grow in an exciting and growing professional environment. Please submit your curriculum vitae and three references to:

New England Biolabs, Inc.
Human Resources
32 Tozer Road
Beverly, MA 01915-5510

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SCIENCE MAGAZINE
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1515 BROADWAY
NEW YORK, N.Y. 10036
THE INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)
SEEKS A DEPUTY DIRECTOR GENERAL
FOR RESEARCH

RESPONSIBILITIES:
- Provide leadership in multidisciplinary research among scientists in various agricultural disciplines from both developed and developing countries.
- Develop, budget, monitor, and evaluate research conducted within a decentralized management structure.
- Establish and maintain collaborative research programs that complement those of national agricultural research systems in rice-growing countries.

QUALIFICATIONS:
- PhD in agricultural or biological sciences with excellent scientific record and recognition.
- Demonstrated vision and experience in the planning and accomplishment of interdisciplinary research.
- Ability to motivate an internationally recruited staff from different cultural, social, and scientific backgrounds.
- Extensive experience in administrative and financial management.
- Experience in international collaborative research, both with national agricultural research systems in rice-growing countries and advanced institutes.

The Deputy Director General for Research will live at IRRI headquarters on the campus of The University of the Philippines, Los Baños—40 km south of Manila. Substantial international travel will be required. The salary and benefits will be commensurate with salaries and benefits of similar international institutes and programs in agriculture.

IRRI is an international, non-profit, agricultural research institute funded by about 30 donor nations and organizations. IRRI conducts research on the rice plant and on all phases of rice production, management, distribution, and utilization. Its goal is to enhance rice production and sustainability to benefit the more than one billion people in the world who are dependent on rice for their livelihood and as their basic food.

Applications due: 30 March 1988
Submit curriculum vitae and the names of three references to:
Dr. Klaus J. Lampe, Director General-Designate
IRRI
P.O. Box 933
Manila, Philippines

HEAD OF CARDIOVASCULAR RESEARCH

The Hospital for Sick Children Research Institute, one of the largest and most active of its kind in the world, is seeking a researcher with a Ph.D. or M.D. to lead a group in areas related to cardiovascular physiology, development, function or structure. Currently, the group consists of 2 full-time researchers and 3 clinician/researchers, and is associated with leading pediatric cardiology, cardiology and cardiac surgery divisions. There is an opportunity for modest growth of the research group in the near-term and further expansion in the future. Currently, approximately 4,000 square feet of space is available.

The successful applicant will be expected to conduct his/her own research as well as encourage and develop the research of other members of the group.

Salary and level of appointment negotiable.

Please send replies to: Dr. James D. Friesen, Director, Research Institute.

Merck Sharp & Dohme Research Laboratories

...a world-wide leader in the development of pharmaceutical and biological products, is currently offering several excellent career opportunities for Biologists, Biochemists and Microbiologists.

BIOLOGIST / BIOCHEMIST

Responsibilities will include biodistribution of label compounds, histology and animal physiology for projects relating to in vivo imaging. Broad biochemical/physiological laboratory background as well as ability to interact effectively in a scientific environment is necessary. A diverse background in animal models, biochemistry, and histological skills is desirable. Candidates should possess a B.S./M.S. biology/biochemistry degree or the equivalent. (Respond to Job #50)

BIOCHEMIST

Duties will involve using recombinant DNA techniques including DNA isolation, manipulation and restriction analysis, construction and screening of cDNA libraries by oligonucleotide and antibody methodology, DNA sequencing, site directed mutagenesis, gene expression in bacterial and mammalian systems, as well as protein isolation techniques. B.S./M.S. degree or the equivalent is required, preferably with experience in some or all of the above techniques. (Respond to Job #51)

MOLECULAR BIOLOGIST

Responsibilities will include the utilization of a broad spectrum of techniques, including construction of cDNA and genomic DNA libraries, DNA/RNA preparation, blot analyses, DNA sequencing, vector construction, and transfection and culturing of microbial and mammalian cells. B.S./M.S. degree in biochemistry, molecular biology, or the equivalent, with at least 2 years of broad and significant experience in molecular biology is required. (Respond to Job #52)

MICROBIOLOGIST / BIOENGINEER

Duties for this position will involve fermentation biology, including setting up and operating small and large-scale fermenters and harvesting equipment; analyzing fermentation samples using a variety of techniques such as copy number, Northern, Southern, and Western blots and also maintenance of the culture collection. A B.S. or M.S. degree in microbiology, chemical engineering, or the equivalent, and 3-5 years experience in a biochemical, biotechnology, or microbiological environment is required. (Respond to Job #53)

Excellent salary and benefits programs accompany these positions at our modern research laboratories located in Montgomery County.

When responding, please indicate on the envelope Job# for which you are applying, and send resume with salary requirements to:

Michele A. Dauber, Bldg. 42-2
Merck Sharp & Dohme Research Laboratories
West Point, PA 19486

EEO/AA/VH/EMPLOYER

555 University Avenue, Toronto, Ontario MSG 1X8
THE HOSPITAL FOR SICK CHILDREN
OB/GYN FACULTY POSITION

The Department of Obstetrics and Gynecology, University of Oklahoma Health Sciences Center in Oklahoma City is seeking an individual with research interests in reproductive biology. The ideal candidate must have experience in cell culture, experience in reproductive biology, early gamete physiology, and andrology. Ph.D. required. Preference will be given to (i) individuals familiar with in vitro fertilization techniques, especially nonhuman primates, and (ii) individuals with at least a peripheral interest in reproductive immunology. The individual should be prepared to participate in student teaching and assisting in research projects of students and residents. Candidates should be capable of initiating research efforts with clinical relevance as well as working independently on more basic projects.

Send curriculum vitae and bibliography:
John I. Fishbourne, Jr., M.D.
Professor and Chairman
Department of Obstetrics and Gynecology
University of Oklahoma College of Medicine
P.O. Box 24901, 635 700
Oklahoma City, OK 73190
An Equal Opportunity Employer

University of Florida. The Department of Chemistry seeks a postdoctoral associate with research interests in the experimental and/or theoretical polymer chemistry of synthetic or biological macromolecules. Teaching at all levels is expected. Rank is open, including the assistant professor level. Send a detailed curriculum vitae, a list of publications, and a clear statement of research plans (less than six pages), and names and addresses of three references recommended to: K. B. Waggoner, Department of Chemistry, University of Florida, Gainesville, FL 32611. Closing date is 1 April 1988. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

PLANT PHYSIOLOGICAL ECOLOGY—POSTDOCTORAL POSITION (1-year minimum); field research on plant stress, transpiration, photosynthesis, or ecological aspects of secondary chemistry in a project evaluating the ecological consequences of enhanced solar ultraviolet radiation. Knowledge of plant gas exchange, solar spectral irradiance assessment, microclimate, plant secondary chemistry, computer skills, and modeling experience desirable. Send resume, selected reprints and names of three references to: Maryln M. Caldwell, Ecology Center, Utah State University, Logan, UT 84322–5205. Closing 15 March 1988 or until suitable applicant found.

POPULATION GENETICS

The Department of Zoology at the University of Vermont seeks a tenure-track ASSISTANT PROFESSOR to strengthen its strengths in ecology, evolutionary biology, and genetics. The successful applicant should use modern techniques to integrate field, laboratory, and theoretical approaches to study the genetics of populations. The appointee will be expected to pursue a vigorous, externally funded research program, to participate in graduate and undergraduate teaching, and to supervise graduate students in M.S. and Ph.D. programs. Ph.D. required, postdoctoral experience preferred; women, minorities, and handicapped applicants are especially welcome. Send curriculum vitae, statements of research and teaching interests, copies of significant publications, and arrange to have three letters of reference sent by 31 March 1988 to: I. Herbert Schall, Chair, Search Committee, Department of Zoology, University of Vermont, Burlington, VT 05405. Telephone: 802-656-2900.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available immediately to study x-ray absorption spectroscopy at the National Synchrotron Light Source. Initial term 2 years, with possible extension. Projects available to study either biologically related or materials science related applications. Prior experience with x-ray techniques and radiation highly desirable. Salary commensurate with experience. Send curriculum vitae and letters of recommendation to: Prof. N. J. Lawandy, Department of Chemistry, University of Michigan, Ann Arbor, MI 48109–1055. The University of Michigan is an Equal Opportunity Employer.

POSTDOCTORAL FELLOW/RESEARCH ASOCIATE position available to study lipid interactions in liposomal structures. Ph.D., biophysical expertise, and previous experience with x-ray techniques required. Background in phospholipid and sterol interactions, lipidosome characterization, drug encapsulation, or fluorometric or other spectroscopic techniques ($20,500–$26,500) and position dependent on training and experience. For information or to apply, contact: Dr. Wolfgang J. Baumann, The Hormel Institute, University of Minnesota, 287 2nd Ave. N.E., Austin, MN 55912. Telephone: 507-437-9630. Applications should be received by 7 March 1988, and should include curriculum vitae, names of three references, and a 1-page summary of previous work and position is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL NIH TRAINEE/Ship position available for new Ph.D.'s interested in communication (ontogeny, genetics, physiology). Possible research areas include chemoreception, ESS, parental care, sociality in spiders, reptiles, mammals, people. For information and application write to: Dr. Richard Sandhaus, Ethology Graduate Program, Department of Psychology, University of Tennessee (UTK), Knoxville, TN 37996–0990. UTK is an Equal Opportunity/Affirmative Action Employer.

Penn State POSTDOCTORAL POSITION Available immediately to develop novel selection and culture techniques for microorganisms. Opportunity to develop and initiate adenylate cyclase cloning studies with mammalian cell cell lines, growth and pathway regulation. A Ph.D. and a strong background in microbial diversity and physiology required. Additional experience in chemistry and molecular genetics helpful. Excellent research laboratories located in new Biotechnology Institute headquarters building. Submit resume and three letters of evaluation to: John Polissar, Director, Penn State Biotechnology Institute, 519 Biotechnology Headquarters Building, University Park, PA 16802. Applications will be accepted until 15 April 1988, or until the position is filled. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION—Available immediately to study the mechanism of cell growth control, including growth factors, growth inhibitors and ion fluxes. Experience in mammalian cell culture, use of radioisotopes, and/or protein purification are desirable. Salary and benefits at nationally competitive levels. Interested candidates should submit curriculum vitae and two letters of recommendation to: Dr. Terry C. Johnson, Processes Laboratory Division of Biology Ackert Hall Kansas State University Manhattan, KS 66506 Kansas State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study molecular mechanisms of hormone action using a primate cell culture model system. Projects available to study hormone receptor interactions, and intracellular regulation of gene expression. Send curriculum vitae, names of three references to: Dr. Patricia M. Hinkle, Department of Pharmacology, University of Rochester Medical School, Rochester, NY 14642. Equal Opportunity Employer M/F.

POSTDOCTORAL POSITION available immediately to study organelle and asymmetric gene transfers in tomato systems using cell fusion and molecular biological techniques. Initial appointment is for 2 years. Preference given to recent Ph.D.'s with experience in plant genetics, cell, and tissue culture and experience in previous biology research. Send curriculum vitae and experience qualifications. Send curriculum vitae and names of three references to: Dr. K. C. Sink, Department of Horticulture and Plant Science, University of Southern California, East Lansing, MI 48824–1325. MSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study asymmetric gene transfers in tomato systems using cell fusion and molecular biological techniques. Initial appointment is for 2 years. Preference given to recent Ph.D.'s with experience in plant genetics, cell, and tissue culture and experience in previous biology research. Send curriculum vitae and experience qualifications. Send curriculum vitae and names of three references to: Dr. K. C. Sink, Department of Horticulture and Plant Science, University of Southern California, East Lansing, MI 48824–1325. MSU is an Equal Opportunity/Affirmative Action Employer.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study asymmetric gene transfers in tomato systems using cell fusion and molecular biological techniques. Initial appointment is for 2 years. Preference given to recent Ph.D.'s with experience in plant genetics, cell, and tissue culture and experience in previous biology research. Send curriculum vitae and experience qualifications. Send curriculum vitae and names of three references to: Dr. K. C. Sink, Department of Horticulture and Plant Science, University of Southern California, East Lansing, MI 48824–1325. MSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available in early 1988 to study the differentiation of cultured murine embryonic teratocarcinoma stem cells. The labo- ratory focuses on the control of gene expression during differentiation, and understanding the molecular mechanism by which the vitamin A derivative, retinoic acid, causes the differentiation of certain cell types. A background in cell biology, biochemistry, or molecular biology is desirable, and applicants should be highly motivated, creative scientists. This position is a joint appointment between the Dana-Farber and the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School. Please send curriculum vitae with the names and addresses of three references to: Dr. Lorraine J. Gudas, Associate Professor, 830D, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study the mechanisms of oncomogenesis in gynecological cancers. Prior experience with molecular techniques preferred. Please send curriculum vitae and three letters of recommendation by 15 March 1988 to: Teresa L. Yang-Feng, Ph.D., P.O. Box 3334, Department of Human Genetics, University of California, San Francisco, CA 94136. An Equal Opportunity/Affirmative Action Employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

POSTDOCTORAL POSITION available for a plant molecular biologist or biochemist to study the biosynthesis of sucrose transport in sugar beets. The candidate will participate in an ongoing project aimed at the identification and purification of the sucrose transporter in vacuolar membranes. Knowledge of biochemistry is required and experience in subcellular fractionation, in vitro transport and subcellular chemistry desired. Starting salary commensurate with experience ($22,907 or $27,716). Deadline is 15 March 1988. Interested candidates should send a resume including names of three references to: Dr. Thomas J. Buckholt, Plant Physiological Laboratory, BARC-West, USDA–Agricultural Research Service, Beltsville, MD 20705. Applications in response to this advertisement should be marked RE005. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available 1 July 1988 to study lung lipoprotein (surfactants) metabolism in several collaborating laboratories. The program will focus on (i) Regulation of phospholipid synthesis by intracellular mediators including phosphorylation and char- acterization of membrane-fusion promoting proteins; (ii) Recycling of surfactant including characterization of cell surface receptors; (iii) Regulation of surfactant protein gene expression. Candidates with backgrounds in cell biology, biochemistry or molecular biology should send curriculum vitae, names of three references and a summary of research interests to:

Institute For Environmental Medicine Attention: Maureen Devine, Executive Assistant University of Pennsylvania 14 John Morgan Building 3600 Walnut Street Philadelphia, PA 19104–6068

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

Amgen is a dynamic and fast-paced organization that has established itself as an innovative leader in the development of human pharmaceuticals through applied biotechnology. Our leadership in the development of Erythropoetin and other products has placed us firmly at the forefront of the industry. Our on-going commitment to the development of human pharmaceutical products has created several opportunities for Ph.D. and BS/MS scientists in our Pharmaceuticals and Drug Delivery Group. These positions are part of a multi-disciplinary team conducting basic research on drug absorption and distribution and development of novel drug delivery systems.

DRUG DELIVERY SCIENTIST

The responsibilities for this position include basic research studies of protein and peptide transport across biological barriers and in vivo evaluation of regiospecific drug absorption from the gastrointestinal tract, including the physiological and pharmaceutical factors influencing drug absorption. Additional responsibilities include developing new concepts for enhanced delivery of proteins and peptides and the design of pharmaceutical formulations to improve sustained release and drug bioavailability.

The successful candidate will have a Ph.D. in Biochemistry, Physiology, Pharmaceutical Science, or a related discipline, and extensive experience in in vivo evaluation of pharmaceutical formulations, including a strong understanding of drug metabolism. Dept. #31.

POLYMER SCIENTIST

Responsibilities for this position include the initiation of a program to identify new polymeric materials and methods for the development of controlled drug delivery systems for peptide and protein pharmaceuticals.

Qualified candidates should have a Ph.D. with extensive experience in polymer synthesis, biomaterials or membrane transport phenomena. Dept. #32.

PHARMACEUTICAL SCIENTIST

The responsibilities for this position include the development of new formulations of protein and peptide drugs now under development at Amgen for Phase I and II clinical trials.

Qualified applicants for this position must have an M.S. or Ph.D. in Pharmaceutics or physical chemistry and a minimum of 5 years’ industrial experience in the formulation of drugs, preferably protein and peptide pharmaceuticals. Dept. #33.

RESEARCH ASSOCIATES

Responsibilities of these positions include the development and implementation of analytical methods for stability studies for injectable dosage forms and sustained release formulations of new peptide and protein drugs. Additional responsibilities will include in vitro and in vivo evaluations of novel drug delivery systems.

Qualified applicants must have a BS or M.S. in Chemistry, Biochemistry, Pharmacology or Biology as well as research experience in pharmaceutical analysis or polymer chemistry. Experience with HPLC, UV, TLC and other spectrophotometric methods is desirable, as is familiarity with GLP regulations and FDA guidelines for filing IND and NDA stability data. Dept. #34.

Amgen provides a stimulating and challenging research environment as well as a highly competitive compensation and benefits package, including equity participation, and is located in an attractive community northwest of Los Angeles.

Qualified candidates are encouraged to submit a resume, including references to:

Recruitment - Specify Dept. #

AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320

Equal Opportunity Employer
POSITIONS OPEN

POSTDOCTORAL POSITIONS at the National Heart, Lung, and Blood Institute, National Institutes of Health, Public Health Service are available starting 1 July 1988 to study the biochemistry and physiology of the 70-kD class of heat-shock proteins in yeast. The focus of the laboratory is on the function of these proteins in the heat shock response, and their role in translocating water-stressed proteins through the endoplasmic reticulum, and in the uncoating of clathrin from coated vesicles during endocytosis. These positions have a salary range of $20,000 to $37,997 per annum depending on experience, and are located on the National Institutes of Health (NIH) campus in Bethesda, Maryland. Please send curriculum vitae and three letters of recommendation to: Dr. Lois Greene, Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, 9000 Rockville Pike, Building 8, Room 81-22, Bethesda, MD 20892. An Equal Opportunity Employer.

POSTDOCTORAL POSITIONS in alcohol and drug research on NIAAA training grant. Interdisciplinary approach emphasizing behavioral, genetic, pharmacological and physiological processes. Prefer background in biopsychology, pharmacology, and other neuroscience areas. Curriculum vitae and three letters of reference to: Dr. C. L. Cunningham, Department of Medical Psychology, University of Pittsburgh, Building 3, Room 3201, Pittsburgh, PA 15261. Phone: 412-624-7646.

POSTDOCTORAL POSITIONS available immediately:
(i) To study gene expression mechanism of human cytochrome oxidase in human teratocarcinoma cell line.
(ii) To study growth factor function in Drosophila neuronal development. Seeking self-motivated individuals with good training in molecular biology or genetics. Send curriculum vitae and references to:
Nancy Dock, Business Manager
Department of Molecular Genetics
Beckman Research Institute
of City of Hope
1450 East Duarte Road
Duarte, CA 91010

POSTDOCTORAL AND/OR RESEARCH ASSOCIATE positions are available for persons interested in projects involving structural and molecular aspects of the cytoskeletal system of neurons and epithelial cells. Emphasis is placed on the function of intermediate filaments in normal cells with regard to their interactions with the extracellular matrix. In addition, the alterations in intermediate filament structures in normal and pathological states are being studied. Applicants must hold a Ph.D. or should be in the final stages of a Ph.D. program. Please send curriculum vitae to: Dr. Robert D. Goldberg, Laboratory of Cell Biology and Neurocytology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately to participate in NIH-funded project on respiratory, acid-base and cardiovascu lar effects of exercise in a rat model of simulated high altitude; M.D., Ph.D., or D.V.M. required. Send curriculum vitae and names of three references to: Nestor C. Gonzalez, M.D., Department of Physiology, University of Kansas Medical Center, Kansas City, KS 66103. Telephone: 913-588-7400.

POSTDOCTORAL RESEARCH POSITION
Participate with the goal of developing an independent research program in the projects devoted to the molecular and cellular biology of the bone marrow. Position is within the Center for Neurologic Diseases, Brigham and Women’s Hospital, Harvard Medical School. Opportunities are available for gaining experience with a wide range of laboratory techniques. Send curriculum vitae and names of at least two references to: Dr. K. E. Rifkind, Center for Neurologic Diseases, Brigham and Women’s Hospital, Harvard Medical School, 75 Francis Street, Boston, MA 02115. An Equal Opportunity Employer.

PROTEIN CHEMIST
Junior faculty level position for experienced protein chemist to conduct an independent research program within the Center for Neurologic Diseases, Brigham and Women’s Hospital and Harvard Medical School. Successful applicant will participate in a research program directed at the protein chemistry and molecular biology of neuronal aging, particularly in Alzheimer’s disease, and will develop independent experiments in tandem with ongoing research at the Center. Candidate will also develop new directions for product development programs. Applicants should have experience in protein purification and sequencing. Interested candidates should reply to: Director, Personnel, Brigham and Women’s Hospital, 75 Francis Street, Boston, MA 02115. An Equal Opportunity Employer.

The Department of Neurology at the University of Alabama at Birmingham has an opening in a RESEARCH ASSISTANT PROFESSOR in a non tenure-earning track. Qualified candidates should hold a Ph.D. or 2 years more of postdoctoral training in an area relevant to Alzheimer’s disease. Individuals who have interests in cholinergic mechanisms or cytoskeletal changes in Alzheimer’s disease should apply. Please send curriculum vitae and three references by 31 March 1988 to: John N. Whittaker, M.D., Chairman, Department of Neurology, University of Alabama at Birmingham, University Station, Birmingham, AL 35294. Telephone: 205-934-2402. The University of Alabama at Birmingham is an Equal Opportunity/Affirmative Action Employer.

IMREG, INC.
RESEARCH OPPORTUNITIES
BIOCHEMISTRY AND IMMUNOLOGY
IMREG, INC., a leader in the development of immunosupportive drugs, is expanding its research and development production facility and is currently recruiting scientists (Ph.D.) with all levels of experience and training in isolation and structural elucidation of proteins/peptides and/or regulation of the cellular immune response. Responsibilities will be commensurate with experience and training. Professional opportunities are available in the following areas: HPLC, gel electrophoresis, peptide mapping, microsequencing, lymphokine assays, cell subset preparation and characterization, flow cytometry, and biological production and assay. IMREG, INC., offers a competitive salary and comprehensive benefits package. Please send letter, curriculum vitae, and list of publications to: Personnel, IMREG, INC., Building 400, One Kendall Square, Cambridge, MA 02139.
The University of Maryland Medical Biotechnology Center, located on the professional schools campus in Baltimore, Maryland, is one of four centers of the Maryland Biotechnology Institute. The Center's primary mission is to conduct research in the development and application of biotechnology for the benefit of medical and related sciences. The Center will provide an environment for basic and applied research in medical biotechnology with thematic emphasis on bio-imaging, vaccine development/immunology/AIDS, nucleic acid metabolism and neurosciences. This Center is an exciting venture combining the resources and perspectives of a major university with state and city governments in continuing collaboration with industrial partners.

The Director of the Medical Biotechnology Center will have a unique opportunity to develop and implement a new research facility in an area of significant intellectual and commercial interest. The Director is expected to develop the Center, including staffing, establish extramural support and coordinate site development. The Director administers the resources of the Center, maintains liaison with other Centers of the Institute, coordinates Center activities with University of Maryland academic departments, provides direction for Center-sponsored research, and maintains working relationships with both private and public partners.

The Director will combine strong scientific credentials as a tenured professor, administrative experience, and entrepreneurial spirit necessary to bring the Medical Biotechnology Center into a national leadership position with demonstrated ability to secure private and public funds for support of the Center.

Letters of nomination or application should be submitted to:

Dr. Nicholas R. Bachur, Chairman
Medical Biotechnology Center Search Committee
University of Maryland Medical Biotechnology Center
618 West Lombard Street, 2nd Floor
University of Maryland at Baltimore
Baltimore, MD 21201

All nominations or applications should be accompanied by a resume and the names of at least three persons who may be contacted. Nominations or applications received by March 15, 1988 will receive full consideration, but will be accepted until a suitable candidate is selected.

The University of Maryland is an equal opportunity employer.
RESEARCH SCIENTIST
EXPLORATORY RESEARCH

Amgen is a dynamic and growing organization that is a recognized leader in recombinant DNA technology. Our leadership in developing erythropoietin and other products for human therapeutics, human diagnostics, animal health care and specialty chemicals has placed us firmly in the forefront of the industry. We currently have an opportunity for a Research Scientist to contribute to our Exploratory Research Group.

Qualified candidates will have a Ph.D. and at least 2-4 years of postdoctoral experience in the molecular and cellular biology of any of the following disciplines: neurobiology, lipid metabolism, bone formation, soft tissue regeneration, hematology, endocrinology or immunomodulators. Experience in cDNA cloning and gene expression as it relates to these disciplines is highly desirable.

Amgen offers a stimulating and challenging research environment as well as an attractive location (about an hour northwest of Los Angeles). Amgen also offers a competitive compensation and benefits package. Qualified applicants should send a resume, in confidence, to:

Recruitment, Dept. #112B
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal Opportunity Employer

MOLECULAR BIOLOGISTS

Merck Sharp & Dohme Research Laboratories is currently offering excellent career opportunities for Molecular Biologists to join the expanding department of Cellular and Molecular Biology. Research will include the application of a broad spectrum of techniques in recombinant DNA, such as DNA/RNA preparation, construction and screening of genomic and cDNA libraries, blot analysis, DNA sequence analysis, DNA vector constructions, and site-directed mutagenesis. These techniques will be applied to the isolation, analysis and expression of genes of potential pharmaceutical interest.

A B.S. or M.S. in Biochemistry or the equivalent with at least three years of broad and significant experience in molecular biology are required.

Excellent salary and benefits programs accompany these positions at our modern research facilities in Rahway, New Jersey and West Point, Pennsylvania.

Please send your resume, three professional references whom we may contact, salary requirements as well as geographic preference in complete confidence to:

Manager Personnel Relations, W422

MERCK SHARP & DOHME RESEARCH LABORATORIES
West Point, PA 19486
EEO / AA / VH / EMPLOYER

Admissions Director

The California Institute of Technology is seeking an energetic and imaginative Director of Admissions. The Director will be responsible for designing and implementing an innovative recruitment plan that promotes Caltech’s position as a premier undergraduate program in the sciences and engineering with a dual emphasis on teaching fundamentals and providing unusual research opportunities. Our recruitment goal is to increase the geographic, gender, and racial diversity of Caltech’s exceptional undergraduate population. The Director will also serve as a member of the faculty Admissions Committee responsible for the selection process.

Caltech is an independent, privately supported university offering education at both undergraduate and graduate levels. It is one of the world’s major research centers in science and engineering. The undergraduate program emphasizes a core curriculum in the basic sciences, education for all students in humanities and social sciences, and advanced curricula in science and engineering. The freshmen class averages 215 students and the undergraduate enrollment is 850.

Candidates must have an established professional background in college admissions. Experience in designing a recruiting plan and leading a recruiting effort is essential. Other qualifications include outstanding managerial and leadership skills, and the personal warmth that reflects the serious but congenial atmosphere of undergraduate life to prospective students, parents, and secondary school contacts. The candidate selected must be available to travel, as appropriate to accomplish recruiting goals.

Direct inquiries, nominations and letters of application to: Dr. James J. Morgan, Vice President for Student Affairs, Caltech, Pasadena, CA 91125. Applications should be accompanied by a resume and names and addresses of three references. The closing date for applications is March 18, 1988. A starting date of approximately July 1, 1988 is planned. We are an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply.

Leadership Excellence
Innovation

The Solar Energy Research Institute (SERI) is the nation’s primary federal laboratory for the development of solar energy as a viable energy supply. Based in Golden, Colorado, the Institute houses leading scientists, engineers and other technical personnel involved in state-of-the-art research, development, and testing of renewable technologies. We invite you to consider the following opportunity:

PROJECT COORDINATOR—AQUATIC PROGRAM

The successful candidate will provide leadership for SERI’s Aquatic Species Program which supports research in aquatic biomass production for conversion to fuels. He/she will be responsible for the management of this activity through technical planning, reporting, and assessment and through oversight of subcontracted research activities.

This position requires an advanced degree in the biological sciences, or equivalent experience, and strong written and verbal communication skills. Experience in the coordination of technical research programs for content and mix is highly desirable.

Interested candidates should submit a letter of introduction and a detailed CV to: Mr. G. M. Sereny, E2310-315, Solar Energy Research Institute, 1617 Cole Boulevard, Golden, CO 80401. We are an equal opportunity employer.
RESEARCH ASSOCIATES
MOLECULAR BIOLOGY

Amgen, an industry leader in advanced biotechnology, develops products for a wide variety of applications. Recent progress has created opportunities for Research Associates in our Specialty Chemicals and Enzymes Group.

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

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

Recruitment, Dept. #23
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal Opportunity Employer

DIRECTOR OF
MICROBIAL GENETICS

Cetus Corporation, a frontrunner in the field of biotechnology, invites applications for a Senior Scientist to serve as a Department Director and to direct research in his/her own lab.

As Department Director, responsibilities include scientific oversight of approximately 30 personnel on multiple projects, interaction with R&D Management, and administrative responsibility for Department personnel and budgeting issues.

Candidates should have at least 6-10 years' post-doctoral experience and an extensive publication record in molecular approaches to gene regulation and microbial genetics. A demonstrated ability to manage a research team is essential. Personal qualities should include strong analytical and communication skills combined with an outgoing and positive management style.

We offer an excellent career opportunity and compensation package. For immediate consideration, please send C.V. to:

Cetus Corporation
Box JMCR
1400 Fifty-Third Street
Emeryville, CA 94608

Cetus

Research Opportunities in
PROCESS DEVELOPMENT

The Dow Chemical Company, in Midland, Michigan is a recognized world leader in the chemical industry. Expanded research efforts in the area of biochemical process development and biotransformations have created an immediate need within the Organic Specialties Laboratory in the Central Research Department for a

MICROBIAL ENZYMATOLOGIST

We have an immediate opening in biocatalytic process development for a candidate with a strong background in enzymology, microbiology and biorganic chemistry. The ideal candidate will have a Ph.D. in biochemistry or microbial enzymology with a solid, working knowledge of organic chemistry.

The successful candidate will have significant experience in application of microbial enzyme systems to organic process development.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package.

Send resume to:
Technical Recruiting
Department ME-1
P.O. Box 1655
Midland, MI 48641-1655

The Dow Chemical Company is an Equal Opportunity Employer
RESEARCH ASSOCIATE—BIOCHEMISTRY
A research associate position is available in x-ray and neutron diffraction studies of cyclodextrins. Analysis of hydrogen bonding networks will be emphasized. Extention of this approach to proteins and nucleic acids is anticipated. Experience in cryocrystallography/biochemistry desired. Send resume to: Dr. Brian R. Hengsten
Oak Ridge National Laboratory
Health and Safety Research Division
Building 9207, MS 002
Oak Ridge, TN 37831
An Equal Opportunity/Affirmative Action Employer

RESEARCH CHEMICAL ENGINEER—Research effects of interfacial and electrostatic phenomena in minerals and coal beneficiation. Construction and testing of a bench-scale electrocoagulation particle separation. Coal beneficiation by particle agglomeration, micronization, emulsification and magnetic desulfurization of chemically treated coal. Develop mathematical and computer models for clean coal technologies. Responsible for all aspects of hazardous waste management. Ph.D. in chemical engineering required. Knowledge required of fluid dynamics, interfacial phenomena, solid-liquid separation, coal petrography, surface chemistry and system construction. Expertise required in computer mathematics. Salary and benefits. Send resume to: Dr. Rajesh K. Nae, Director of Research, Department of Obstetrics and Gynecology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.

TENURE-TRACK FACULTY POSITION IN MARINE SCIENCE
The University of Alaska Fairbanks, Institute of Marine Science is seeking applicants for a tenure-track faculty position in the general area of marine mammalogy. The appointment will involve research and graduate level instruction and supervision. The Institute of Marine Science has a dynamic group of 22 faculty from various disciplines and about 35 graduate students. It is involved in a variety of research activities in arctic and subarctic areas.

We are seeking a person who will develop a program addressing the physiological or behavioral ecology of pinnipeds and/or cetaceans in the Arctic and Subarctic. An emphasis on the particular geographic region to which the candidate will contribute will be expected. Polar and subpolar experience, awareness of Soviet, Canadian, and Scandinavian research, and interest in collaborative research on an international scale are highly desirable. Many activities will be multidisciplinary.

Candidates must possess a Ph.D. in an appropriate discipline. We expect to fill this position at the assistant professor level, but a more senior appointment may be possible, depending on the applicant's credentials.

Applications will be received by 15 March 1988. Applicants should send a statement of interest, curriculum vitae, and the names and addresses of three references to: Dr. Francis H. Fay, Chairman
Search Committee
c/o Director's Office
Institute of Marine Science
University of Alaska Fairbanks
Fairbanks, AK 99775—1080

The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution. Your application for employment with the University of Alaska may be subjected to a personal belief test as a final step.

The Department of Biology and Health Sciences at the University of Detroit Mercy is seeking a faculty member for a 9-month, TENURE-TRACK POSITION in mammalian physiology, to become effective 15 August 1988. Responsibilities include teaching introductory and graduate teaching, as well as the development of an active research program.

The Ph.D. is required. Rank and salary are dependent upon qualifications. Interested candidates should contact: Pauline J. Wood, Ph.D., Chairman, Department of Biology and Health Sciences, University of Detroit, 4001 West McNichols, Detroit, MI 48221. Telephone: 313-927-1181. The University of Detroit is an Equal Opportunity/Affirmative Action Employer.

VIROLOGIST
The Department of Microbiology and Immunology, School of Medicine, University of North Carolina at Chapel Hill invites applications from outstanding individuals for a tenure-track position in the area of virology. Rank is open, depending on qualifications. Our department consists of two professorial members with strong research programs in prokaryotic and eukaryotic gene expression, molecular immunogenetics, molecular virology, and viral pathogenesis. We are seeking an individual of demonstrated research productivity and teaching ability with a research program in molecular virology. Applicants should have a Ph.D. or equivalent in virology or related field. Position available July 1988. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer. Applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily. Reply by 1 April 1988 with curriculum vitae and names and addresses of three references to: Dr. Harvey Gray
F.D.
Chapel Hill, NC 27599

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW/RESEARCH ASSISTANT: Several positions in research and clinical programs have now opened to reproduce and extend studies in virologic immunology. We are looking for candidates, Ph.D./M.D./M.S./B.S., with experience/strong research interest in sperm immunology/biomedical immunomodulation and fertility and embroyonic development [Science 225, 342 (1984); Proc. Natl. Acad. Sci. U.S.A. 83, 5716 (1986)]. Send your resume and references to: Dr. Rajesh K. Nae, Director of Research, Department of Obstetrics and Gynecology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.

POSITIONS OPEN

RESEARCH CHEMICAL ENGINEER—Research effects of interfacial and electrostatic phenomena in minerals and coal beneficiation. Construction and testing of a bench-scale electrocoagulation particle separation. Coal beneficiation by particle agglomeration, micronization, emulsification and magnetic desulfurization of chemically treated coal. Develop mathematical and computer models for clean coal technologies. Responsible for all aspects of hazardous waste management. Ph.D. in chemical engineering required. Knowledge required of fluid dynamics, interfacial phenomena, solid-liquid separation, coal petrography, surface chemistry and system construction. Expertise required in computer mathematics. Salary and benefits. Send resume to: Dr. Rajesh K. Nae, Director of Research, Department of Obstetrics and Gynecology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.

POSITIONS OPEN

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW/RESEARCH ASSISTANT: Several positions in research and clinical programs have now opened to reproduce and extend studies in virologic immunology. We are looking for candidates, Ph.D./M.D./M.S./B.S., with experience/strong research interest in sperm immunology/biomedical immunomodulation and fertility and embryonic development [Science 225, 342 (1984); Proc. Natl. Acad. Sci. U.S.A. 83, 5716 (1986)]. Send your resume and references to: Dr. Rajesh K. Nae, Director of Research, Department of Obstetrics and Gynecology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.

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Candidates must possess a Ph.D. in an appropriate discipline. We expect to fill this position at the assistant professor level, but a more senior appointment may be possible, depending on the applicant's credentials.

Applications will be received by 15 March 1988. Applicants should send a statement of interest, curriculum vitae, and the names and addresses of three references to: Dr. Francis H. Fay, Chairman
Search Committee
c/o Director's Office
Institute of Marine Science
University of Alaska Fairbanks
Fairbanks, AK 99775—1080

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

UROLOGY FACULTY POSITION. Requires formal post-resident training in pediatric urology with demonstrated research productivity. Equal Opportunity Employer. Box 27, SCIENCE.

THE UNIVERSITY OF CALGARY
VERTEBRATE PHYSIOLOGIST
The University of Calgary Department of Biological Sciences invites applications for a tenure-track assistant professorship. The successful candidate will teach at both undergraduate and graduate levels in an active research program. The primary teaching responsibility will be an undergraduate course in mammalian physiology. Some previous or potential interest in molecular biology is an asset, but it is not a requirement.

The appointment will be open as of 1 July 1988. Salary is competitive and is negotiable according to qualifications. The successful candidate must be eligible for a permanent position at the University of Calgary. Applicants are invited to submit a complete curriculum vitae and three references by 30 November 1987. The applications will be reviewed by a search committee and the names of candidates will be forwarded to the University of Calgary's personnel committee. If the successful candidate is a member of a minority group, he or she will be appointed at the assistant professor level; if not, the appointment will be at the associate professor level.

Send applications to: Dr. D. R. Davies, Head
Department of Biological Sciences
The University of Calgary
2500 University Drive N.W.
Calgary, Alberta T2N 1N4

VICE PRESIDENT FOR SCIENCE
The New York Botanical Garden in the Bronx, New York, is soliciting applications for the position of Vice President for Science. The Garden seeks a scientist with an active research program, who is a recognized leader in his or her field, with strong connections to either industry and economic botany, to head a science department on the Bronx campus of about sixty, including twenty Ph.D. scientists.

Interested candidates should submit a letter of application to: The Office of the President, The New York Botanical Garden, Bronx, NY 10458. Please include a three-page statement of research accomplishments and interests. The New York Botanical Garden is an Equal Opportunity/Affirmative Action Employer.
RESEARCH

POSTDOCTORAL FELLOW

Postdoctoral position available immediately in 1 of 2 areas: 1) Sugar transport and metabolism in cultured cells; 2) Protein kinase-C regulation of epithelial cell junctions. Previous experience in cell culture, membrane transport, or protein kinase biochemistry is desirable, but not required.

We offer a competitive salary with no city wage tax deducted and free parking. Send resume, statement of research interests and names of 3 references to: James M. Mullin, PhD,

LANKENAU MEDICAL RESEARCH CENTER
Lancaster Ave.
west of City Line
Philadelphia, PA 19151

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PREDOCTORAL FELLOWSHIPS

INTEGRATED PROGRAM IN CELLULAR,
MOLECULAR AND BIOPHYSICAL STUDIES

COLUMBIA UNIVERSITY
COLLEGE OF PHYSICIANS AND SURGEONS

The objective of the integrated Program is to train outstanding students who have strong commitment to biological research and recognize the heuristic value of the interdisciplinary exploitation of new technologies, but have not yet chosen a specific area of concentration. The Program provides full financial support that includes tuition, fees and a living allowance, which is currently $11,000 per year. Housing is available in the area of the Medical Center and convenient, inexpensive public transportation makes it possible for students to commute from other areas and to enjoy the vast cultural resources of New York City.

PARTICIPATING DEPARTMENTS: Anatomy and Cell Biology, Genetics and Development, Microbiology, Biochemistry and Molecular Biophysics, Physiology and Cellular Biophysics

Research Interests of the Faculty

- Prokaryotic and eukaryotic gene structure
- Regulation of gene expression
- RNA processing
- Microbial, yeast and viral molecular genetics
- Gene transfer
- Molecular genetics and immunology of parasites
- Biochemistry and genetics of recombination
- Developmental biology
- Human genetic disorders
- Animal virology
- Cellular regulation of the immune response
- Molecular biophysics including: Theoretical studies of macromolecules, X-ray diffraction and NMR studies of proteins and nucleic acids
- Membranes proteins, membrane biogenesis and transport
- Post-translational modification of proteins
- Cellular and molecular neurobiology, neurophysiology and neuroendocrinology
- Chemical and viral carcinogenesis
- Cardiovascular physiology and pharmacology

For further information
Integrated Program Director
C/o Department of Microbiology
Columbia University
701 West 168th Street, Room 1206
New York, NY 10032

Faculty Position
Department of Urology
Mayo Clinic

Tenure Track Position in Urologic Cancer Research, Cell Biology/ Cancer Immunology/Molecular Biology, Ph.D. or M.D. to establish and direct a research laboratory.

Please submit resume to:
P. P. Kelalis, M.D.
Chairman,
Department of Urology,
Mayo Clinic,
Rochester, MN 55905

Equal Opportunity Employer

PHARMACOLOGISTS
DRUG DISCOVERY

We are a subsidiary of Imperial Chemical Industries, a widely diversified world leader, with the resources to match. Expansion of research programs has created these openings at our state-of-the-art laboratories.

PULMONARY

- ENZYMEOLOGIST/BIOCHEMIST - Ph.D. with 2-3 years postdoctoral expertise with sound understanding of enzyme kinetics. Will interact with team of biologists and chemists to design and analyze mechanism of action inhibitors of human neutrophil elastase. Mechanistic studies on other enzymes anticipated. Broad background in biochemistry advantageous.

CNS

- POSTDOCTORAL FELLOW - Ph.D. in biochemistry or neurochemistry with hands-on experience with second messengers and mechanism of signal transduction. Experience in measuring calcium fluxes, receptor function, and tissue culture techniques are highly desirable. One to two year appointment renewable by mutual consent. Presentation at national and international meetings and publication of findings will be encouraged.

- JUNIOR PHARMACOLOGISTS - Several B.S. or M.S. positions in biology or biochemistry with experience in neurobiology or cell biology to work on receptors, binding techniques, catecholamine metabolism, and mechanism of cellular function. Familiarity with HPLC, tissue culture techniques is desirable.

Superb facilities in suburban setting 25 miles south of Philadelphia. Competitive salary and comprehensive benefits, including unique investment plan. Principals only. Charles T. Brodigan, Associate Employment Manager.

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Wilmington, DE 19897

Equal Opportunity Employer, M/F
VISION SCIENCE. Tenured or tenure-track position, rank and salary commensurate with qualifications. Vigorous research program in visual psychophysics, willingness to teach vision science to optometry students. Send letter of application, curriculum vitae, names of three references to: Dr. Jerry L. Christiansen, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121. Application deadline: 24 March 1988. An Equal Opportunity Institution.

JPL/NASA VISITING SENIOR SCIENTIST ATMOSPHERICS BRANCH VISIFLAM AND ULTRAVIOLET ASTRONOMY

The Jet Propulsion Laboratory is seeking a senior scientist to develop and coordinate NASA visible and ultraviolet astronomical and technology efforts including theoretical astrophysics, laboratory astrophysics, development of advanced instruments, and ground-based rocket and spacecraft observations. Duties include scientific planning and administering the supporting research and technology, data analysis, and sounding rocket programs. This activity includes evaluation of proposals, arrangement of reviews by peers of the proposal outside NASA Headquarters, recommendation of funding and monitoring of grants. Additional duties include provision of science input to the Program Scientist in his scientific management role on the Hubble Space Telescope Program and new Explorer candidates. Tenured-faculty status is desired in early summer of 1988. Appointment must be U.S. citizens or permanent residents and are expected to return to their home institution following their NASA assignment. Please provide curriculum vitae, bibliography, and the names of four references to: Dr. Harry Ashkenas 180-900 Department U59 Jet Propulsion Laboratory 4800 Oak Grove Drive Pasadena, CA 91109 818-354-8251 An Equal Opportunity Employer

WATER RESOURCES

The School of Forestry and Environmental Studies at Duke University seeks applicants at the ASSISTANT OR ASSOCIATE PROFESSOR level for a tenure-track or tenured faculty position in water resources. Applicants should have training and/or experience in fields related to water resources: development of models of water supply and water quality. Interest and experience in modeling and/or experimental approaches to solving water resource problems is desirable. The successful applicant is expected to develop an externally funded research program and to teach and advise graduate- and undergraduate-level students. Applicants should send a resume and three letters of recommendation to: Dr. Kenneth R. Knoerr, Chairman, Water Resources Search Committee, School of Forestry and Environmental Studies, Duke University, Durham, NC 27706. Applications will be accepted through 11 March 1988 or until a suitable candidate is identified. Duke University is an Equal Opportunity/Affirmative Action Employer.

GRADUATE TRAINING PROGRAM

GRADUATE ASSISTANTSHIPS IN MOLECULAR BIOLOGY AND BIOCHEMISTRY. Several positions are available in the Department of Molecular Biology and Biochemistry, Wesleyan University (Middletown, Connecticut). Research interests of the faculty emphasize regulation of gene expression in embryogenesis and development; protein structure, function and design; DNA replication; yeast genes homologous to protein kinase oncogenes; structure and function of chromosomal proteins; protein-nucleic acid interactions; chemistry of reactions at phosphorus; nuclear magnetic resonance spectroscopy and computer modeling. All students receive tuition remission, good fringe benefits, and, for Ph.D. students,ellowship if applicable. Opportunities to teach. Write to: Dr. Norma Allwell, Director, Graduate Admissions, Department of Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT 06457 or call: 203-327-9411 ext 2524.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE AND PUBLIC HEALTH

Postdoctoral position in molecular virology available immediately. Applicants should have experience in molecular biology and virology to participate in research related to molecular pathogenesis of human immunodeficiency virus infections.

Salary: Salary commensurate with NIH positions; excellent benefits

Contact: Send curriculum vitae, summary of research experience, and names of three references to:

Dr. B. Frank Polk
Infectious Disease Program
Department of Epidemiology
Johns Hopkins School of Hygiene and Public Health
550 North Broadway, Suite 710
Baltimore, MD 21205

THE JOHNS HOPKINS UNIVERSITY POSTDOCTORAL POSITION IN THEORETICAL PHYSICS

The Theoretical Interdisciplinary Physics and Astronomy Center (TIPAC) invites applications for a TIPAC postdoctoral fellowship in the Department of Physics and Astronomy for a 1-year period, starting 1 September 1988. The fellowship is renewable yearly for a total of 3 years. The successful candidate is expected to have a Ph.D. in physics or a closely related field, a strong background in theoretical physics, and experience in high-energy particle physics, or astrophysics is preferred. Demonstrated ability to work in more than one of the above areas is desirable. Applications should be sent to:

Professor J. C. Walker, Chairman
Department of Physics and Astronomy
The Johns Hopkins University
Baltimore, MD 21218

Deadline for application is 4 March 1988. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer.

The Division of Meteorology and Physical Oceanography (MPO) at the University of Miami Rosenstiel School of Marine and Atmospheric Science (RSMAS) wishes to announce applicability of three POSTDOCTORAL FELLOWSHIPS supported by NASA, NSF and the Rosenstiel School. Candidates should possess a recent (less than 2 years) Ph.D. and have credentials in modeling or analysis of geophysical fluid systems. Applicants with interests in mesoscale ocean dynamics, satellite remote sensing, numerical ocean or atmospheric modeling, and coupled physical-biological processes, are particularly urged to apply.

Fellowships will start in fall 1988. The current fellowship stipend is $36K, with a second year extension available. The deadline for receipt of all materials is 15 May 1988. Requirements are: A letter requesting consideration, copies of graduate research, and references, curriculum vitae, three letters of reference, and official transcript of graduate records. Proof of degree awarded is required prior to appointment.

Materials should be sent to: Chairman, RSMAS/MPO, University of Miami, 4600 Rickenbacker Causeway, Miami, FL 33149.
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Isco chromatographs offer top value. An Isco single-pump ternary or dual-pump binary gradient system complete with IBM computer can give you greater performance and capability than the two top-selling systems that cost much more. You'll get great value with any Isco HPLC system: analytical, microbore, or prep; stainless or inert.

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And top reliability. We've made over 50,000 detectors, pumps, and related instruments to earn our reputation for dependability. We back it up with the best system warranty offered anywhere — three years parts and labor.

Find out how much value Isco gives you by sending for a comparison of the leading HPLC systems. We'll also include our 80-page general catalog and 48-page HPLC catalog. Call toll free (800) 228-4250 (except NE, AK) or write: Isco, Inc., P.O. Box 5347, Lincoln, NE 68505.

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How To Choose The Right Low Pressure LC System Even If It Isn’t Ours

To simplify choosing the right peristaltic pump, detector and fraction collector for your LC System, review these guidelines and send for our free Low Pressure System Selection Worksheet:

1 Identify your separation goals.
   - Know the characteristics of your sample. What mass will you load on your column? What flow rate will you need to achieve optimal speed and resolution? At which wavelengths does your sample exhibit maximum absorbance? What size fractions will you collect? Are you interested in collecting peaks?

2 Examine the components’ specs.
   - After you’ve identified the key operating parameters, take a look at the pump, detector and fraction collector specifications to be sure they meet your needs. To illustrate, let’s look at specifications for components in the Gilson Low Pressure System.

   - The most important criteria used to select a peristaltic pump are smooth, stable flow and usable flow rate range. The Gilson system uses the new Minipuls 3 Pump. Stepper-motor drive and proven pump head design ensure smooth flow from 1 ul to 50 ml/min. A high flow head allows flow rates from 50 ml to 220 ml/min. Interchangeable pump heads with 1-, 2-, 4-, or 8 channels are available.

   - Wavelength specificity and ease-of-use are key considerations when choosing a detector. The Gilson 112 UV/VIS fixed-wavelength detector allows selection of wavelengths from 214 nm to 640 nm. A choice of five flow cells accommodates a wide range of flow rates and sample concentrations. A large digital readout and convenient autozero and event mark functions keep detector operation easy.

   - Select a fraction collector according to your collection mode, fraction volume, and multiple column collection needs.

   - Gilson’s FC 203 fraction collector allows drop, time, or peak collection modes with up to ten collection windows in each mode. The widest range of racks available—capable of handling as many as 128 fractions—makes the FC 203 suitable for almost any application.

3 Check for compatibility of components with each other and with your future needs.
   - At this point, you’ve identified components to meet basic needs, but also look at the components as a system. Were they designed to work together? Or will you need to buy complicated adapters and special plumbing? Working with a single supplier avoids the service and support problems often associated with a system assembled piece-by-piece.

   - You should also assess your future needs. An LC system may work fine for your current application. But will you need to change detection wavelengths or collection volumes later? Is an upgrade to HPLC a possibility? If so, consider modular equipment that adapts to your changing needs easily and inexpensively.

4 Look at each supplier’s record of reliability, service and support.
   - After identifying suitable components, you narrow your choice by looking at each supplier’s track record for reliable equipment and efficient service.

   - To evaluate the Gilson Low Pressure System, consider our reputation for fraction collectors and detectors. Gilson has a proven track record that began more than 35 years ago. More than 1000 FC 203s—introduced just 16 months ago—continue to display dependable, trouble-free operation.

   - The Minipuls 2, the reliable predecessor to our new Minipuls 3, has earned spaces on more than 24,000 lab benches worldwide, making it the best-selling peristaltic pump.

5 Use our free Low Pressure LC System Selection Worksheet to gather and compare your options.
   - For the final step in choosing your system, compare the information you’ve gathered. To help, we’ve put together a selection worksheet to simplify the process.

   - This free worksheet lists major criteria to use in your comparisons. We’ve filled in information about the Gilson Low Pressure System and have left space for you to fill in specs from other suppliers.

   - Why do we encourage this comparison? Because it’s the best way to buy a system matched to your needs. Plus, we’re confident that in most cases your low pressure system will be a Gilson Low Pressure System.

   - So, for your free Low Pressure System Selection Worksheet, simply circle the magazine’s reader service number or call us toll free at 800-445-7667. We’ll see that you get your worksheet fast.

Gilson Medical Electronics, Inc., Box 27, 3000 W. Beltline Hwy., Middleton, WI 53562 USA, Tel: (608) 836-1551 Telex: 26-5478
Gilson Medical Electronics (France) S.A., 72 rue Gambetta, B.P. No. 45,95400, Villiers-Le-Bel, France, Tel: (1) 39.90.54.41 Telex: 696682

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