POSITIONS OPEN

ASSISTANT PROFESSOR (PROTEIN BIOCHEMICAL PHYSICIST)
The Department of Pharmaceutical Chemistry (Phar-
maceutics) at The University of Kansas invites applica-
tions for a tenure-track position starting 15 August 1991.
Applicants should have a Ph.D. degree, preferably in bi-
ologists or biochemists who can apply modern physico-
chemical techniques to study protein structure.
Applicants should show a dynamic and innovative ap-
time of hire, a Ph.D. degree in pharmacology, biochemistry, chemis-
try, or a closely related area. Preference will be given to
applicants with research experience in the pharmaceutical sciences.
Applicants should have demonstrated the ability to commu-
fully meet the obligations of the position and is expected to
A. B. M. is required.
Dr. Ronald T. Borchards
Department of Pharmaceutical Chemistry
4006 Malott Hall
The University of Kansas
Lawrence, KS 66045

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

ASSISTANT PROFESSOR, TENURE TRACK
The University of Minnesota has an immediate need in
general obstetrics with undergraduate/graduate teaching
duties, full patient care/call duties, and an interest in
developing clinical research programs.
Qualifications: assistant professor (tenure track), M.D.,
completed obstetrics/gynecology residency, demonstrated
interest in research, teaching, and clinical care. The
approval to receive first consideration. However, applica-
tions will be accepted until 1 May 1991 and will be
reviewed immediately.
Dr. Linda Carson
Chairperson, Search Committee
University of Minnesota
Department of Obstetrics/Gynecology
Box 395, UMHC
420 Delaware Street S.E.
Minneapolis, MN 55455

Last date for receipt of applications is 31 March 1991.
The University of Minnesota is an Equal Opportunity
Educator and Employer and specifically invites and encourages
applications from women and minorities.

MOLECULAR BIOLOGIST
The Department of Pathology at the University of Pittsburgh School of Medicine is seeking a Ph.D. molecu-
lar biologist to fill a new position. Appointment will be
at the ASSOCIATE PROFESSOR level. Applications are
sought from individuals with an established record of
research achievement, including external funding in
microbiology/virology including human papilloma virus.
The anticipated date of appointment is 1 July 1991.
Applications should be sent to: Trevor A. Macpherson,
M.D., Chief of Pathology, Magee-Womens Hospital,
Forbes Avenue and Halket Street, Pittsburgh, PA
15213.
The University of Pittsburgh School of Medicine is an
Equal Opportunity Employer.

The Cancer Immunobiology Center and Department of
Microbiology, University of Texas (UT) Southwes-
tern Medical School, has a position for an ASSISTANT
PROFESSOR who will teach graduate students and postdoctoral fellows, and perform research
with group to develop new approaches to the therapy of human disease. The position involves the develop-
ment of genetically engineered reagents. Requires M.D.
Ph.D., 2 years of postdoctoral fellowship, major
research achievements in molecular engineering of anti-
body molecules, antigen-specific receptors on T-cells
and their expression. Send curriculum vitae, cover letter,
terms, and references. Two positions are available:
Eileen S. Villaraza, Ph.D., Department of Immunology,
Northwestern University, 633 West Chicago Avenue,
Chicago, IL 60611.

The Department of Pharmacology and Toxicology at
the Philadelphia College of Pharmacy and Science (PCPS) anticipates the available postdoctoral fel-
culty position at the rank of ASSISTANT PROFES-
SORS beginning 15 August 1991. A Ph.D. degree and 2
years of postdoctoral training are required. Responsibil-
ities will include teaching pharmacology and/or toxicol-
yogy to graduate and undergraduate students. Candidates are
expected to develop a teaching research program
supervised by extramural funding. Applicants with
research interests in all areas of pharmacology and tox-
icology are encouraged to apply. Appointment is
31 March 1991. Candidates should submit curriculum
vitae, statement of research goals, and the names of
three references to: Search Committee, Department
of Pharmacology and Toxicology, Philadelphia
College of Pharmacy and Science, Woodland Avenue
43rd Street, Philadelphia, PA 19104. PCPS is an
Equal Opportunity/Affirmative Action Employer.
Assistant Professor

**Molecular Virology**

**VETERINARY MOLECULAR BIOLOGY**

Tenure-track faculty 80% research position (12 months) supported by full-time technician and seed money. Salary: $34,000 to $40,000 per year based on experience and qualifications. Ph.D. or Ph.D./D.V.M. required; research interests in a modern area of molecular virology, along with an understanding of molecular biology are encouraged to apply. Applicants should have postdoctoral experience, record indicating ability to perform independent research, and potential to establish competitive, extramurally funded research. Candidates should have a willingness to collaborate with other faculty and participate in active graduate program essential. Send curriculum vitae, letter describing research interests and goals, and arrange for three letters of recommendation to be sent to: Chair, Search Committee, Veterinary Molecular Biology, Marsh Laboratory, Montanta State University, Bozeman, MT 59717-0360. Screening begins 20 February 1991 and continues until suitable candidate is hired. Women preferred. Equal Opportunity/Affirmative Action Employer.

**Positions Available, Postdoctoral**

Through Assistant Professor, Jived. Gene expression and structure in colon cell differentiation and transformation. Forward research and name of references to: Leonard H. Augenlicht, Ph.D., Director, Molecular Oncology Program, Albert Einstein Cancer Center, Montefiore and Albert Einstein Medical Centers, 111 East 210th Street, Bronx, NY 10467.

**Associate Professor**

(12 Months, Tenured)

**DEPARTMENT OF NUTRITION SCIENCES**

University of Alabama at Birmingham (UAB)

Responsibilities include conduct of research and education of graduate students in the area of energy metabolism. Applicants must be M.D., Ph.D., or equivalent with expertise in studies of energy metabolism, particularly in use of a room indirect calorimeter and must have proven track record of generating grant support. Send curriculum vitae, a letter of research interests to: Dr. Roland Weinsier, Chairman, Department of Nutrition Sciences, 1629 University Boulevard, Birmingham, AL 35294. The University of Alabama at Birmingham administers its educational programs and activities, including admission, without regard to race, color, religion, sex, age, national origin, handicap, or Vietnam era or disabled veteran status. (Title IX of the Education Amendments of 1972 specifically prohibits discrimination on the basis of sex.) Direct inquiries to the UAB Affirmative Action Officer, The University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.

The Department of Biology at Georgia State University invites applications for a PROFESSOR OF BIOLOGY with expertise in immunology and genetics. Candidates should have at least 10 years of research experience beyond postdoctoral training. Candidates should have experience and exceptional research credentials as evidenced by records of publications and extramural funding. The successful candidate is expected to maintain a strong and competitively funded research program and to teach at the undergraduate and doctoral levels. Applications, including curriculum vitae, reprints, a statement of research plans, and three letters of reference, should be sent to: Professor J.J. Augenlicht, Department of Biology, Georgia State University, P.O. Box 4010, Atlanta, GA 30302-4010. Search will continue until successful candidate is hired. The University of the University System of Georgia, is an Equal Opportunity/Affirmative Action Employer.

**Positions Open**

**PROFESSOR AND DEPARTMENT HEAD.** The University of Arkansas at Little Rock and applications for the position of professor and head of the Department of Plant Pathology, College of Agriculture and Home Economics at Fayetteville. The department head is responsible for providing academic leadership in teaching and research; overseeing graduate and undergraduate programs in plant pathology and entomology, and for coordinating department contributions to the extension program in Arkansas and will serve as a member of the Arkansas State Plant Board. Duties include administrative, teaching, research and development responsibilities. Applicants must have a Ph.D. in plant pathology or a closely allied discipline, experience in developing and implementing effective plant pathology programs, and demonstrated ability to interact with the diverse groups of persons and agencies involved with the department. Applications are due 1 March 1991 and must include a letter stating interest qualifications, names and addresses of five references. Send applications or nominations to: W.C. Yearian, Chair, Search Committee, 321 Agriculture Building, University of Arkansas, Fayetteville, AR 72701. The University of Arkansas is an Affirmative Action/Equal Opportunity Employer.

**Program Director**

A position is available for a Ph.D. virologist to establish a new program in virology. The selected candidate will be responsible for establishing and managing studies relating to experimental antiviral compounds during development. Experience with established antiviral susceptibility test methods and the capability of developing new assay systems are required. Excellent compensation includes participation in the company's $50,000 stock option plan. Send curriculum vitae to: Bonita L. Baskin, Ph.D., Laboratory Director, ViroMed Laboratories, Inc., 8500 Feith Road, Minnetonka, MN 55343.

An Affirmative Action/Equal Opportunity Employer.

**Attention Science Advertisers**

**$40 Special**

Place your classified ad in any February 1991 issue of Science and we'll give you double exposure. We'll display the same position announcement at the AAAS Employment Exchange for only $40 more. That's less than the cost of one additional line.

Harry—plug your ads now! The Employment Exchange will take place at the AAAS Annual Meeting, 15 to 18 February 1991, at the Washington Sheraton Hotel in Washington, D.C. Thousands of scientists in various disciplines have been invited to participate. Act fast and you can reach this unique pool of candidates.

When you place your classified ad in Science, simply let us know how much you expect to save by the use of the $40 Special and we'll do the rest.

For information on how you can interview candidates on-site, call J. Roberta at 202-326-6737.
BIOTECHNOLOGY

DIRECTOR OPPORTUNITY

DEPARTMENT OF INFECTIOUS DISEASES

PCR DIVISION

Cetus Corporation, a leader in the development and design of PCR, has an opening in the Diagnostics Research Program for an experienced professional with an infectious disease background. This senior position will be responsible for a large department of scientists who specialize in molecular virology. The Diagnostics Research Program is involved, in collaboration with Hoffman-La Roche, in the design and development of diagnostic applications of the Polymerase Chain Reaction (PCR) in the areas of infectious disease, genetic disease and cancer.

The successful candidate will have a PhD or MD with strong research credentials, 10 years’ experience in infectious diseases and a minimum of 5 years managing a multi-disciplinary and competitive research program.

Cetus offers competitive salaries, excellent benefits and a collaborative environment that encourages innovation. Please send your CV to Cetus Corporation, Human Resources Department, Box LPD6JL, 1400 Fifty-Third Street, Emeryville, CA 94608. EOE.

BIOTECHNOLOGY

MOLECULAR BIOLOGY ASSOCIATE

Animal Cell Expression

The Upjohn Company, located in Kalamazoo, Michigan, is seeking applicants for the position of Research Associate in our Molecular Biology Research Group. A B.S. or M.S. degree in Biology, Biochemistry, Microbiology or a related science plus several years of experience with animal cell expression/molecular biology techniques are needed. The selected candidate will assist a scientist in our neurobiology research program and utilize techniques such as transfection of animal cells, northern/southern blotting and tissue culture of established cell lines. Experience with methods such as nucleic acid hybridization and standard recombinant DNA techniques are desirable.

In addition to an opportunity for professional career growth, we offer a highly competitive salary and benefits package commensurate with experience and expected contribution. We are located in Kalamazoo, a southwestern Michigan community midway between Chicago and Detroit, offering an excellent mix of cultural and recreational opportunities. For confidential consideration please submit your resume, cover letter and transcripts to: THE UPJOHN COMPANY, CORP. RECRUITING/POSITION 5734-HA, 7000 PORTAGE ROAD, KALAMAZOO, MI 49001-0199.

Our Commitment to Scientific Excellence Continues...
**POSITIONS OPEN**

**ASSOCIATE CHAIRMAN FOR CLINICAL RESEARCH**
DEPARTMENT OF INTERNAL MEDICINE
NORTHEASTERN OHIO UNIVERSITY
COLLEGE OF MEDICINE

Administrative research position. Responsibilities include coordinating clinical research within the Department of Internal Medicine and facilitating research capacity at multiple sites. Serves as liaison between hospital coordinators and faculty at the basic sciences and clinical campuses. Works directly with the chairman and the Research Council of the department. Requires a Ph.D. preferred with experience in previous clinical and/or basic research; grant proposal writing. IRB approval and data management experience; qualifications for research track faculty appointment. Excellent communication skills and a demonstrated dedication to research required. Send curriculum vitae indicating position and department and three letters of recommendation by 1 March 1991 to: Dr. Andre Ogniben, c/o Office of Human Resources, Northeastern Ohio University College of Medicine, P.O. Box 95, Rootstown, OH 44272. An Equal Opportunity/Affirmative Action Employer.

**PUBLIC INFORMATION COORDINATOR.**
For scientific society in Philadelphia. Challenging position in public affairs and relations for professional with excellent writing and communications skills. Responsibilities include contact with government officials, scientists, lay persons, and the media. Relevant experience needed. Knowledge of congressional activities, media operating procedures, government, biomedical science, or science writing preferred. Experience coordinating public relations campaigns. Send resume, writing sample, and desired salary range to: P.O. Box 54335, Philadelphia, PA 19108.

**DIRECTOR, TOXICOLOGY.**
Direct and perform toxicity studies of new pharmaceuticals, chemicals, and pesticides, and design research protocols for American, European, and Japanese drug companies on laboratory animals. Studies must meet national and international regulations governing safety testing of potenti new products. Prepare and review scientific reports. Design new contract research facility. Recruit toxicologists and technicians. Design research protocols. Implement quality assurance program and oversee budgeting. Supervise 20+ people. Must have Ph.D. in toxicology and 10 years of experience as a director, toxicologist, or as a toxicologist, contract research. Prior experience required in toxicology contract research laboratory and working with drug companies and government regulatory authorities. Prior development of a viable commercial toxicology laboratory from initial design to profitable operation required. Must have expertise in toxicity studies to meet national and international regulations governing safety testing and in design of research protocols. Forty hours per week, 7:45 a.m. to 4:30 p.m.; $125,000 per year. Mail resume and copy of to: DEED, 1100 North Euclid Avenue, Baltimore, MD 21201; J.O. # 9047007. Job location: Frederick, Maryland. Proof of legal right to work in the United States required.

**BIOCHEMIST.**
The National Fisheries Contaminant Research Center (NFCRC), U.S. Fish and Wildlife Service (USFWS), Columbus, Missouri, is recruiting for a biochemist with interest and experience in biochemistry focusing on aquatic organisms. Candidates with a background in molecular biology and/or biochemical biomarkers are preferred; however, candidates in the areas of fish physiology, aquatic toxicology, or environmental toxicology will also be considered. The position is SEC-THIR and is responsible for designing and conducting investigations into contaminant-related functions in fishes. The incumbent will have substantial freedom for conducting research program within budget and area of expertise and is expected to collaborate on laboratory and field research teams. Candidates with a Ph.D. and professional experience are preferred. The position is full-time and requires U.S. citizenship. IRB approval and data management experience; qualifications and experience. The salary range is $37,294 to $44,548. Those interested should send a letter and curriculum vitae to: Ma. Arlene Schwab, USFWS, NFCRC, 4200 New Haven Road, Columbus, MO 65201 by 15 February 1991 requesting application. The position will advise you where to send your formal application and the application process.

For additional information about the position, contact: Acting Chief Biologist, NFCRC, 314-875-5399.

**POSITIONS OPEN**

**DEAN OF THE COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**
UNIVERSITY OF WISCONSIN-MADISON

The University of Wisconsin-Madison is the original University of Wisconsin, and one of the largest land-grant universities in the United States. The College of Agricultural and Life Sciences, including its School of Natural Resources as well as a number of basic science departments, offers undergraduate and graduate instruction in a wide range of areas including agriculture, business, industry, communications, education, conservation and natural resources, production, and technical assistance. The dean serves as director of the Experiment Stations and is chief academic and executive officer of the college with responsibility for staffing, budget, curriculum, student academic affairs, and space. The dean is also responsible for program coordination with Extension. The college has approximately 1200 graduate students and 2000 undergraduate students. The dean/director supervises a faculty and professional staff of approximately 1200 and a budget of approximately $50 million.

Major qualifications for the position include a proven record of administrative skills and success in managing a large institution. The candidate will have demonstrated accomplishments as a scholar and teacher that meet the standards for a tenured appointment at the rank of professor of Natural Resources-Wisconsin-Madison faculty, and a commitment to maintain and expand undergraduate and graduate instruction, research, public service, and outreach activities. The position is available 1 July 1991. All applications and nominations received by 1 March 1991 will be considered. Send applications or nominations to: Professor John D. Asay, Chair of Search Committee, University of Wisconsin-Madison, 134 Bascom Hall, 500 Lincoln Drive, Madison, WI 53706. Telephone: 608-262-3863.

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

**EPITHELIAL CELL BIOLOGIST.**
The Department of Anatomy announces a tenure-track FACULTY POSITION for an epithelial cell biologist to join our renal cell biology group. Applicants should have expertise in any aspect of the regulation of differentiated cell function or renal tubular cytodifferentiation and kidney organogenesis, including: cell-matrix interactions, transmembrane signaling, membrane trafficking, cell polarity, ion/ fluid transport, cell proliferation, or epithelial response to injury. The successful candidate will participate in lecture/laboratory team-taught histology. Send curriculum vitae, research statement, and the names of three referees to: Dr. David B. Burr, Chairman, Department of Anatomy, University School of Medicine, 635 Barnhill Drive, Indianapolis, IN 46202-5120. Will begin 15 February 1991 and continue until the position is filled. The application is expected to be filled by July 1991. Indiana University is an Affirmative Action/ Equal Opportunity Employer, M/F.

**NSERC-WOMEN'S FACULTY AWARD.**
The University of Victoria, Department of Biochemistry and Microbiology, invites applications for a Natural Sciences and Engineering Research Council of Canada (NSERC) PDF or OGS postdoctoral fellowship for a female Canadian citizen/landed immigrant in biochemistry, microbiology, immunology, and molecular biology who will be considered for a Postdoctoral Research Fellowship. Send curriculum vitae, description of research interests, and names and address of three referees to: Dr. Rozanne Poulsen, Department of Biochemistry and Microbiology, University of Victoria, P.O. Box 3055, Victoria, British Columbia, Canada V8W 3P6. Deadline for applications is 31 March 1991.

**POSITIONS OPEN**

**BARD COLLEGE**
BIOLGY DEPARTMENT, GRADUATE SCHOOL OF ENVIRONMENTAL STUDIES

Bard College is seeking a broadly trained scientist for a half-time, tenure-track position in the Biology Department and a half-time administrative position as director of summer courses and, interdisciplinary master’s of science in environmental studies. Responsibilities include two undergraduate laboratory courses per year and summer graduate courses. We are seeking a qualified scientist with expertise in comparative or environmental physiology who can teach an undergraduate course in general physiology, a graduate course in ecology, and develop courses in other areas of his/her interest.

Those interested in applying should mail a letter, curriculum vitae, and three references to Dr. William T. Maple, Biology Department, Bard College, Annendale-on-Hudson, NY 12504. Bard College is an Affirmative Action/Equal Opportunity Employer.

**FACULTY POSITION, VIROLOGIST**
UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

The Department of Microbiology and Immunology at the University of Miami School of Medicine invites applications for tenure-track faculty positions at either the ASSISTANT OR ASSOCIATE PROFESSOR level. Applicants should have strong research training and expertise in virology, with emphasis in the area of molecular virology. All applicants who wish to be considered for the position at the level of associate professor should have an established, funded research program; applicants who wish to be considered at the assistant professor level should have several years of postdoctoral experience and a compelling career plan. Challenging and well-funded, independent research program. Quality research facilities, start-up funds, and salary will be provided to the appointee. Applicants should have a Ph.D., M.D., or equivalent degree. The appointee will be expected to participate in graduate and medical training programs. Interested applicants should send current curriculum vitae, a statement describing research achievements and future research goals, and the names of three references to: Virology Search Committee, University of Miami School of Medicine, Department of Microbiology and Immunology (R-138), P.O. Box 016960, Miami, FL 33101. The review of applications will continue until the position is filled. University of Miami is an Equal Opportunity/Affirmative Action Employer.

**FACULTY POSITION IN VIROLOGY.**
The Department of Veterinary Microbiology and Parasitology at Louisiana State University School of Veterinary Medicine invites applications for a constant/associate professor level position in virology.

The successful candidate will be expected to participate in teaching infectious disease courses to veterinary students and in the instruction and direction of graduate students. It is expected that this individual will develop a strong research program in the areas of his or her specialty. The department is well equipped and currently has active research programs in molecular and medical virology, immunology, and parasitology. Infectious disease research has been identified as a strategic plan of the college as a research priority and will receive support commensurate with this status. Strong collaborative research arrangements are in place between life science departments on the Louisiana State University campus and are encouraged. Applicants must have a Ph.D. or D.V.M. degree, and degree or a Ph.D. in virology or a related field with substantial experience in contemporary aspects of virology and animal virology, in particular, would be beneficial. Preference will be given to individuals with strong record of research accomplishment. Interested individuals are encouraged to send a letter of interest, curriculum vitae, and three references to: Dr. T. R. Klei, Chairman of Virology Search Committee, Department of Veterinary Microbiology and Parasitology, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803-2078. Applications are expected to be received by 6 January 1991 or until a suitable applicant is identified. Louisiana State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.
Glaxo Inc. will occupy in 1991 a new 1.5 M square foot Research and Development complex in Research Triangle Park, North Carolina. The Glaxo Research Institute, on relocating to this new R&D complex, will focus on expanding programs. As a result of this expansion, we are seeking Scientists for the following positions:

SENIOR SCIENTIST
Fermentation

The individual for this position will be responsible for establishing and supervising our fermentation facility. The duties will include scale-up and optimization of fermentation processes using rDNA-derived microorganisms. This position involves responsibility for close interactions with molecular biologists and protein chemists. The successful candidate will have a Ph.D. degree in Microbiology or Biochemical Engineering and a minimum of 3-5 years' experience in the daily operation of a fermentation facility. A working knowledge of expression systems, mammalian cell culture, and bioreactor operation would be beneficial. Job# 9126X003

SENIOR RESEARCH INVESTIGATOR
Protein X-ray Crystallography

Applicants for this position should have a Ph.D. and 5-8 years' experience in supervising and running a successful laboratory as evidenced by a distinguished record of achievement in solving protein structures by X-ray crystallography. Job# 9141X603

SENIOR SCIENTIST
Protein X-ray Crystallography

The appointment at this position will be made from candidates with a Ph.D. in protein crystallography and 1-3 years' post doctoral experience. Job# 9141X604

The Senior Research Investigator and Senior Scientist will be required to operate the X-ray crystallography laboratory. The laboratory is equipped with two Siemans rotating anodes, array detector, robot for crystallization studies and a dedicated Silicon & Graphics 380 workstation. The protein crystallography group is part of the molecular structure group and is being formed to complement groups already established in protein NMR, computational chemistry, molecular modeling, biological mass spectrometry and protein sequencing. The X-ray crystallography group is supported by a first-rate computer environment which provides access to a CRAY YMP-432 supercomputer and a variety of high end workstations including a PS390 graphics system.

SENIOR RESEARCH INVESTIGATOR
Protein Biochemistry

An experienced Senior Scientist is required to direct and manage a team of scientists whose responsibilities are to develop new methodologies for isolation, purification and characterization of recombinant proteins. The responsibilities of the individual and his group require close interactions with scientists in molecular biology and biophysical chemistry. Qualified applicants for this position must have a Ph.D. in biochemistry or related field and 5-8 years post-doctoral experience. Candidates for this position should have research expertise which should include structure-function studies, enzymology, receptor biochemistry, and a strong interest in developing methods for isolation, purification and characterization of recombinant proteins. Job# 9130

Our Research Triangle Park, N.C. location (near Raleigh, Durham and Chapel Hill) offers a lot more for people who seek a well-rounded, comfortable lifestyle. This world famous scientific, industrial, and academic community affords access to respected universities, beautiful residential areas, major retail centers, excellent health care and abundant cultural and recreational facilities. Join Glaxo and enjoy an excellent salary, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork and outstanding opportunities for career satisfaction.

Send your resume, including salary history with a listing of the appropriate Job#, to: Human Resources Department, Glaxo Inc., P.O. Box 13398, Research Triangle Park, N.C. 27709. (No Phone Calls or Agency Referrals, Please). An Equal Opportunity Employer M/F/H/V.

Glaxo Inc.
Our belief begins with you.
SENIOR SCIENTISTS

Battelle, Pacific Northwest Laboratories is one of five national multiprogram laboratories and is operated by the Battelle Memorial Institute under a contract with the U.S. Department of Energy. The laboratory has a staff of approximately 3,500 conducting research in Physics, Chemistry, Life Sciences, Materials, Engineering, Mathematics, Computer Science, and Earth and Environmental Sciences. PNL is developing a major new initiative, the Molecular Sciences Research Center (MSRC) and the Environmental Molecular Sciences Laboratory (EMSL), which will include the development of the world’s first 1000 MHz NMR spectrometer. Growing programs in the PNL Life Sciences Center, including those which forge research linkages with the MSRC/EMSL staff and facilities, enable us to offer the following positions:

**Senior Molecular Biologist**

The research leader selected will head a research group which focuses on the molecular biology of health effects produced by exposure to various kinds of radiations and chemicals. Requirements include a PhD or equivalent and at least five years of professional experience with a strong publication record in one or more areas of molecular biology of cancer, mutation, or development, and skills in management of research personnel and facilities. Qualifications include expertise/interest in utilizing the unique spectroscopy facilities and staff of the MSRC/EMSL described above to study the structure/function of normal and altered nucleic acids and proteins.

**Senior Cellular/ Mammalian Biologist**

Preferred background includes a PhD and at least five years of professional experience with a strong publication record in one or more areas of cellular radiobiology, mechanistic developmental biology, biology/biophysics of electromagnetic fields, primate physiology, biology/biophysics of exposure to chemicals, or animal model studies of gastrointestinal or cardiovascular diseases. The successful candidate will possess the necessary interpersonal/managerial skills to head a research group working in a number of these areas.

PNL offers an excellent salary and benefits package. Opportunities in teaching and directing graduate student research exist through cooperative programs with the expanding campus of Washington State University-Trinity Cities Campus in Richland as well as with other Pacific Northwest Universities.

For consideration, candidates should send a curriculum vitae, letter of interest, and the names and addresses of four references to: Dr. John D. Zimbrick, Manager, Biology and Chemistry Dept., Battelle, Pacific Northwest Laboratories, P.O. Box 999, Mail Code 1017, Richland, WA 99352. Applications will be accepted until March 1, 1991 or until suitable candidates are found. Battelle-PNL is an Equal Opportunity/Affirmative Action Employer.

Women, minorities, and members of other protected groups are strongly encouraged to apply.

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**PENN STATE**

Director, Biotechnology Institute

**PENNS STAE**

The Pennsylvania State University invites applicants and nominations for the position of the Director of the Biotechnology Institute. The Institute is an inter-college research program involving the colleges of Agriculture, Engineering, and Science, and is funded by industrial, state, federal, and Penn State sources. The Biotechnology Institute currently has a strong focus in plant biotechnology, ranging from research in plant biochemistry and molecular biology to plant development and bioprocessing. It is expected that this focus will continue and be expanded under the new Director. There is also potential for the development of other biotechnology research programs. The Institute houses over 65,000 sq. ft. of new laboratory space and lecture rooms, and has acquired specialized equipment and instrumentation, including facilities for biocomputing, DNA and protein sequencing and synthesis, and a bioprocessing pilot plant.

The Director should be internationally recognized as a researcher, and experience in plant molecular biology is desirable. The Director is the major spokesperson for biotechnology at Penn State, and must provide coordination and leadership to an expanding group of faculty. The Director will also provide liaison to external agencies, alumni, industry, and the public. In collaboration with the Institute’s Advisory Board, the Director identifies program goals and focus and is responsible for raising and maintaining funds for the Institute. The Director will also be responsible for working with various academic departments in the University to fill joint faculty positions in biotechnology and related fields. Applicants should have an established research program plus the ability to coordinate interdisciplinary groups and provide insight and leadership for future opportunities in biotechnology. Continued support of an active research program by the Director is expected.

The Institute is housed on Penn State’s University Park Campus which is located in a pleasant valley among the mountains of central Pennsylvania. The associated community of State College combines the best attributes of a middle sized city with the cultural and intellectual activities of a large university.

Applicants, nominations, and requests for further information will be held confident and should be directed to Professor J. Larry Duda, Chairman of Search Committee for the Director of the Biotechnology Institute, The Pennsylvania State University, 519 Wartik Laboratory, Dept. SCI-1, University Park, PA 16802, (814) 863-3650. Applicants will be evaluated starting February 25, 1991 and continuing until position is filled. The position is available immediately.

An Affirmative Action/Equal Opportunity Employer. Women and Minorities are encouraged to apply.

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**UNIVERSITY OF ARIZONA**
**COLLEGE OF MEDICINE**

Department Head
Pharmacology

The University of Arizona College of Medicine invites applications and nominations for the position of Head in the Department of Pharmacology. Responsibilities include directing, managing, planning, and continuing development of a department committed to excellence in research and the teaching of graduate and medical students. The candidate must have a Ph.D., M.D., or equivalent degree from an accredited institution, be qualified for an academic appointment at the rank of professor, have an outstanding independent research program and demonstrated abilities in teaching, and administration.

Applications should include curriculum vitae, a brief statement of current research interests, and names of at least three references. Women and minorities are encouraged to apply. Applications and nominations should be directed to:

Ronald S. Weinstein, M.D.
Professor and Head
Department of Pathology
Chairman, Pharmacology Search Committee
University of Arizona
College of Medicine
Tucson, AZ 85724
(602) 626-7163

The review of applications will begin April 15, 1991 and will continue until the position is filled.

The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer.
Chair
Department of Environmental Health Sciences
The Johns Hopkins University School of Hygiene and Public Health
Nominations and Applications are invited for the position of Chair, Department of Environmental Health Sciences at the Johns Hopkins University School of Hygiene and Public Health. The Department has a long tradition of excellence in the conduct of Environmental Health Sciences Research and the provision of pre-doctoral/post-doctoral training. The Department has approximately sixty full-time faculty based in the following six divisions: Environmental Chemistry and Biology; Environmental Health Engineering; Occupational Health; Physiology; Radiation Health Sciences; and Toxicological Sciences. Interests of the faculty span a broad array from bench research to participation in professional practice and health promotion. Increasingly, the research is interdisciplinary involving faculty from the Department's six divisions as well as other departments at the School of Hygiene and Public Health, the School of Medicine and elsewhere. Faculty of the Department also provide programmatic consultation to a variety of national and international public agencies as well as private industry.
Candidates for this position should have a strong record of academic accomplishment in the environmental health sciences. In addition, (s)he should have well proven administrative abilities and a capacity to work collaboratively with colleagues in other disciplines. Finally, the candidate should have a broad vision of the future of environmental health sciences and the ability and desire to provide dynamic leadership for an already vibrant department.
Nominations, applications, and inquiries should be directed to:
Dr. Paul Whelton
Chair, Environmental Health Sciences Search Committee
The Johns Hopkins University School of Hygiene and Public Health
Room 1041
615 N. Wolfe Street
Baltimore, Maryland 21205

Dean, College of Natural Sciences
University of Alaska Fairbanks
The University of Alaska Fairbanks invites applications and nominations for the position of Dean of the College of Natural Sciences. The University of Alaska Fairbanks is the main campus of the University of Alaska system and the major center of science research and education. The College of Natural Sciences encompasses four academic departments (Biology and Wildlife, Chemistry, Geology and Geophysics, and Physics) as well as the University of Alaska Museum and the General Science degree program. The College is closely associated with major research institutes (Geophysical Institute and Institute of Arctic Biology) and the Alaska Cooperative Wildlife Research Unit and Alaska Cooperative Fishery Research Unit. UAF is a major center for basic and applied research with outstanding opportunities for study of high latitude systems. The College of Natural Sciences currently enrolls 343 undergraduate majors and 169 graduate students in master's and doctoral programs and has 93 faculty members. Construction of a new Natural Sciences Building is in progress.
The Dean is the chief administrator of the College of Natural Sciences and reports to the Vice Chancellor for Academic Affairs. The Dean is responsible for curriculum development, budgeting and personnel in the College and must facilitate interactions with research institutes.
The UAF campus overlooks Fairbanks, a thriving progressive community of 72,000, rated fourth best small community in the nation. Fairbanks offers outstanding cultural diversity, unsurpassed natural beauty and outdoor recreation, and friendly local atmosphere. Fairbanks is a transportation hub served by major airlines. Public and private schools in Fairbanks have an excellent reputation.
Candidates for this position should have the following qualifications:
Earned doctorate and significant record of scholarly achievement sufficient for appointment at the rank of Professor in one of the departments of the College.
Ability to build and maintain strong academic programs and recruit outstanding faculty and students.
Experience in academic administration and budgeting.
Strong human relations and communications skills.
Vision and capacity to successfully develop nontraditional educational opportunities.
Send curriculum vitae; statement of interest; and names, addresses, and phone numbers of five references to: Dr. Mark W. Oswood, Chair, CNS Dean Search Committee, Department of Biology and Wildlife, 211 Irving Building, University of Alaska Fairbanks, AK 99775-0180. Phone: (907) 474-7037; FAX: (907) 474-6967.
Screening of applications will begin 11 February, 1991. Anticipated starting date for the position is July 1, 1991.
The University of Alaska is an Affirmative Action, Equal Opportunity employer and educational institution.

Research Opportunities
In Neurobiology
Amgen, a leader in the discovery and marketing of hematopoietic and tissue repair growth factors, has made a significant commitment to the development of protein therapeutics to treat neurological disorders. We have immediate openings at several career levels for scientists to participate in a multi-disciplinary research program to discover and develop novel neurotrophic factors using in Vitro assays and in Vivo models.
Successful candidates will have experience in one or more of the following: neuronal cell culture, lesion and disease paradigms or nervous system development.

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

Research Associate Positions.
A Bachelor’s degree or equivalent and relevant work experience in neurobiology, including neuronal cell culture or neurohistochemistry, are necessary.
Amgen offers a stimulating and challenging research environment on the leading edge of biotechnology. Our need for these positions reflects an ever increasing commitment to the development of significant products for human health care through excellence in research.
If you have the necessary skills and would like to be a part of an organization that places a high priority on its human resources, please send us a complete CV in confidence.

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

Equal Opportunity Employer
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FAX: 202-682-0816

FACULTY POSITION IN MOLECULAR BIOLOGY. To lead a vigorous research and graduate program involving state-of-the-art molecular approaches. Research may include regulation of gene expression, protein secretion, lactation, cellular growth, or organellar biogenesis. Combined salary, up to $150,000, and start-up funds will be requested. This tenure-track position is part of a university-wide program of excellence in molecular biology and biotechnology. Send letter of interest, resume, transcripts, and three reference letters by 1 April or until filled to: Dr. S. A. Ewing, Department of Animal Science, Iowa State University, Ames, IA 50011. An Equal Opportunity/Affirmative Action Employer.

ONE-YEAR FACULTY APPOINTMENT DEPARTMENT OF BIOCHEMISTRY NORTH CAROLINA STATE UNIVERSITY

A 1-year academic appointment with teaching responsibilities at the undergraduate and graduate levels in biochemistry is available as of 1 July 1991. The position has the responsibilities of teaching two one-semester courses during the year, academic advising, and opportunity to join one of the department's ongoing research programs. The Department of Biochemistry, within the Colleges of Agricultural and Life Sciences and Physical and Mathematical Sciences, offers B.S., M.S., and Ph.D. degrees in biochemistry, and has research programs in animal, plant, and microbial biochemistry and molecular biology. Send resumé, a brief description of teaching and research experience and interests, and three letters of reference to: Academic Search, Dr. Paul F. Agris, Head, Department of Biochemistry, Box 7622, North Carolina State University, Raleigh, NC 27695–7622.

FACULTY POSITION IN DEVELOPMENTAL BIOLOGY CHILDREN'S HOSPITAL RESEARCH FOUNDATION (CHR) CINCINNATI, OHIO

The Basic Sciences Division has an opening for an ASSISTANT/ASSOCIATE PROFESSOR (tenure track) in the University of Cincinnati to be filled in 1991 or 1992. The position will allow over 90% of time to be spent on research, with the remaining time spent in an active developmental biology graduate program. A new research building is nearing completion. A position will be filled in this area. Send curriculum vitae, research activities, and the names and addresses of three references to: Search Committee Division of Basic Science Research, IDR 731 Children's Hospital Research Foundation Elland and Bethesda Avenues Cincinnati, OH 45229–2899

CHR is an Equal Opportunity/Affirmative Action Employer.

TENURE-TRACK POSITION LECTURER IN PLANT PATHOLOGY

The Department of Plant Pathology and Microbiology, Faculty of Agriculture of the Hebrew University of Jerusalem, Rehovot, invites applications for a tenure-track position to carry out research and teaching in molecular biology of phytopathogenic fungi. Highly qualified epidemiologists in phytopathology will also be considered. The position also requires supervision of M.Sc. and Ph.D. students. Language of instruction is Hebrew. The candidate will be expected to teach undergraduate and graduate courses in plant pathology, according to the department's needs, and suggest new graduate courses in phytopathogenic fungi in the area of his/her competence. The applicant will be expected to develop research programs and will be required to seek grant support for research purposes. The position is available beginning 1 October 1991.

Applicants should submit curriculum vitae, list of publications, a brief description of experience and scientific interests, and three letters of recommendation that should be sent separately before 15 February 1991 to:

Professor Yigal Henis, Chairman Department of Plant Pathology and Microbiology Faculty of Agriculture The Hebrew University of Jerusalem P.O. Box 12 Rehovot 76100, Israel

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR BIOLOGY. To lead a vigorous research and graduate program involving state-of-the-art molecular approaches. Research may include regulation of gene expression, protein secretion, lactation, cellular growth, or organellar biogenesis. Combined salary, up to $150,000, and start-up funds will be requested. This tenure-track position is part of a university-wide program of excellence in molecular biology and biotechnology. Send letter of interest, resume, transcripts, and three reference letters by 1 April or until filled to: Dr. S. A. Ewing, Department of Animal Science, Iowa State University, Ames, IA 50011. An Equal Opportunity/Affirmative Action Employer.

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Professor Yigal Henis, Chairman Department of Plant Pathology and Microbiology Faculty of Agriculture The Hebrew University of Jerusalem P.O. Box 12 Rehovot 76100, Israel

BONUS CIRCULATION FOR YOUR CLASSIFIED AD AT PITTSBURGH CONFERENCE


SCIENCE Classified Advertising Telephone: 202-326-6555 FAX: 202-682-0816
The National Institute of Mental Health's expanding commitment to basic neuroscience and behavioral science research has created openings for a number of important positions in the Division of Basic Brain and Behavioral Sciences. The Division seeks applications from experienced and talented scientists to fill vacancies at the branch and program level in seven major multidisciplinary branches. Vacancies exist within the following divisional structure as indicated by asterisks (*):

- **Basic Behavioral and Cognitive Sciences Research Branch**
  - Basic Behavioral Processes Program*
  - Cognition, Learning and Memory Program*
  - Theoretical and Computational Psychology Program*

- **Basic Prevention and Behavioral Medicine Research Branch**
  - Behavioral Medicine Program*
  - Populations at Risk Program*
  - Prevention and Behavior Change Program*

- **Cognitive and Behavioral Neuroscience Research Branch**
  - Behavioral Neuroscience Program*
  - Cognitive Neuroscience Program*
  - Theoretical Neuroscience Program*

- **Neuroimaging and Applied Neuroscience Research Branch**
  - Neural Systems Program*
  - Neuroimaging Program*
  - Neuroscience Centers Program*

- **Personality and Social Processes Research Branch**
  - Interpersonal and Family Processes Program*
  - Personality and Emotions Program*
  - Sociocultural and Environmental Processes Program*

- **Psychopharmacology Research Branch**
  - Behavioral Pharmacology Program*
  - Neuropharmacology Program*
  - Psychotherapeutic Drug Development Program*

- **Molecular and Cellular Neuroscience Research Branch**
  - Developmental Neuroscience Program*
  - Neurogenetics Program*
  - Neuroimmunology/Neurovirology Program*
  - Neurotransmitter/Neuroregulation Program*

Branch Chiefs are responsible for leading the national research effort in a particular multidisciplinary branch. The annual budget for each branch ranges from $10-$21 million with a staff of 6-8 people each. Branch Chiefs plan, develop, coordinate, and fund national and international programs of support for research and training in the substantive area. Since the research scope crosses a number of scientific disciplines, Branch Chiefs must have demonstrated broad administrative and supervisory experience. Applicants must possess significant research experience, good oral and written communication skills and a recognized interest in and capacity for extramural science management. Minimum qualifications include a M.D., Ph.D., or equivalent training in an academic field related to the health sciences pertinent to the work of the position. The grade of Branch Chief positions is at the GS-15 level, with a salary range from $61,643 to $80,138 per annum (up to approximately $83,400 for Medical Officers).

Program level positions have responsibility for planning, developing and administering a specific substantive program of support. As recognized authorities, applicants for these positions analyze current research activities; identify extramural research areas of underdevelopment; and stimulate the submission of grant applications in the program's field of emphasis. Applicants must possess a M.D. or Ph.D. degree, or equivalent training in a basic biomedical, behavioral, or physical science, a minimum of 3 years postdoctoral experience, good oral and written communication skills, and have demonstrated a strong interest in extramural science management. The grades of these positions are at the GS-13/14 level, with a salary range from $44,348 to $68,129 per annum (up to approximately $70,900 for Medical Officers).

Medical Officers may be eligible for an additional physicians comparability allowance (PCA) of $8,000 to $20,000 per annum for the GM-15 positions and $5,000 to $10,000 for the GS-13/14 positions.

Benefits include a retirement plan, health and life insurance, sick and annual leave. Relocation expenses may be paid. Duty station is Rockville, MD. United States citizenship is required.

Vacancies will be filled through the Civil Service or an appointment in the Commissioned Corps of the U.S. Public Health Service. ADAMHA is an Equal Opportunity Employer. Applications from women and minority group members are especially solicited. Interested applicants should submit an SF-171 (Application for Federal Employment) and accompanied by a current curriculum vitae and bibliography. Applications for this announcement will be accepted until June 30, 1991 or until filled. During the announcement period, applications received will be considered and screened every 60 days. Submit applications to: Ms. Topaz, Personnel Operations, NIMH, Room 15C12, 5600 Fishers Lane, Rockville, Maryland 20857, or call (301) 443-9094.

**ADAMHA IS AN EQUAL OPPORTUNITY EMPLOYER**
Research Scientists

Biotechnology Research Institute conducts cancer research and diagnostic product development under the umbrella of the Pharma Division of Akzo, N.V., a worldwide organization with commercial endeavors in 50 countries.

Formulation/Pharmaceutical Scientist
This scientist will develop novel approaches to the formulation of biological pharmaceuticals for diagnostic/therapeutic applications. Requirements include a Ph.D. in chemistry/biochemistry or a BS/MS with at least four years' related formulation experience. Experience with proteins is essential. Additional knowledge of biochemistry, technetium chemistry or lyophilization technology would be helpful.

Organic Chemistry/Radiochemistry
This scientist position involves design, synthesis and characterization of organic compounds suitable for attaching radioisotopes to proteins. Requirements include a Ph.D. in organic chemistry or a BS/MS with at least four years' experience in organic synthesis. Knowledge of biochemistry, radiochemistry or inorganic chemistry would be useful.

Postdoctoral Position
A postdoctoral position is available to work with Dr. Ray F. Ebert on exploratory basic research leading to the development of novel diagnostic tests and test methods for clinical hematology. Applicants should have experience in biochemistry/molecular biology and immunology.

Biotechnology Research Institute offers competitive salaries and benefits including a company-matched Incentive Savings Plan. For prompt consideration, please submit a C.V. and a description of current and future research interests to: Organon Teknika Corporation, Biotechnology Research Institute, 1330-A Piccard Drive, Rockville, MD 20850. EOE H/V/F

TOXICOLOGISTS
The Procter & Gamble Company has several entry-level staff toxicology openings in the Laundry and Cleaning Products Sector. These positions require a Ph.D. degree, preferably in toxicology; however, degrees in pharmacology, physiology, nutritional toxicology, or other life sciences are acceptable if the training or experience meets the needs of the openings. These positions involve the design, implementation, and interpretation of a breadth of toxicology studies and applying the results to the development of risk assessments for new products, chemicals, and product ingredients. These toxicologists will work with multi-disciplinary teams and interact with contract facilities, scientists outside the Company, and regulatory agencies at both state and federal levels.

Procter & Gamble is a world leader in the research, development, and manufacture of a wide variety of consumer products including those in the health, personal care, beauty care, and pharmaceutical areas. Sales last year were $24.1 billion, and the R&D budget was $693 million.

We offer competitive salaries, a fringe benefits package in the top 5% of U.S. firms, and excellent opportunities for personal and professional growth.

Applicants must be presently authorized to work in the U.S. on a full-time basis. Resumes, with a list of publications, should be sent to:

Dr. T. J. Logan
Toxicology positions-LCP
The Procter & Gamble Company
P.O. Box 398707
Cincinnati, Ohio 45239-8707

Procter & Gamble is an EQUAL OPPORTUNITY EMPLOYER.
UCLA
Departments of Medicine and Physiology
CARDIOVASCULAR
TENURE TRACK POSITION

Applicants are being sought whose research emphasis is on molecular biology, structure-function relations or on receptor function as applied to the cardiovascular system. Clinical credential in the cardiovascular area is preferred but not essential. The recruitment is cooperative among the Departments of Physiology, Medicine and the Cardiovascular Research Laboratory at the UCLA School of Medicine. Please respond, with curriculum vitae including names of those willing to serve as references, to:

G.A. Langer, M.D.
Cardiovascular Research Lab, A3-381 CHS
UCLA School of Medicine
10833 Le Conte Avenue
Los Angeles, CA 90024-1760

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

Carolina Workshops
University of North Carolina at Chapel Hill

PROTEIN TECHNOLOGY
May 19-June 2, 1991

A general course on biochemical and immunological techniques as applied to the synthesis, isolation, and characterization of peptides and proteins. Techniques to be featured will include: Enzyme isolation from tissues, purification by ion exchange, size exclusion, reverse phase, thin layer, and affinity chromatography, analysis of isoenzymes, preparation of monoclonal antibodies, Western blotting, and epitope mapping. Students will also synthesize peptides by both manual and automated methods. Students who wish to prepare monoclonal antibodies from their own material can do so if the requisite antigen is provided to the course instructors at least 6 weeks prior to the beginning of the course. Tuition is $1,950.
Instructors:
Frank Church, UNC-CH
Howard Reines, UNC-CH
Bruce Erickson, UNC-CH
Tom Traut, UNC-CH

cDNA CLONING & GENE EXPRESSION
July 21-August 4, 1991

A general DNA techniques workshop focusing on synthesis of cDNA and cloning into lambda vectors. Techniques will include mRNA isolation, Northern transfer and hybridization, cDNA synthesis, adapter facilitated cloning into lambda vectors, subcloning into plasmid vectors, and DNA sequencing. Libraries will be screened with antibodies and DNA probes. Additional techniques to be utilized as time permits will include computer analysis of DNA sequence data. Students who wish to create their own cDNA libraries may bring their own mRNA preparations.
Tuition is $1,950.
Instructors:
To be announced

Future Carolina Workshops
Human Genome Analysis - 4Kt, 28-Nov. 15, 1991

CAROLINA WORKSHOPS are a series of intensive hands-on laboratory courses designed to teach cutting edge methods in molecular biology. The techniques include basic manipulations such as isolation of insert and vector DNA, ligations, electrophoretic analysis and elution from gels, blotting techniques, preparation and labeling of probes, identification of cloned DNA, and protein purification. Each course provides experience in the basic techniques which serve as a solid background in molecular biology. Each individual course has an identifiable theme and emphasizes in addition to the general techniques, specialized techniques such as DNA sequencing, in vitro mutagenesis, cDNA synthesis, expression vectors or protein/immunological techniques.

Many applicants to the Carolina Workshops already hold the M.D. or Ph.D. degree. Our courses are very heavy on hands-on contact with the protocols, light on lectures concerning the basics. Hence, a reasonable familiarity with the concepts behind DNA and protein techniques such as those found in good texts (e.g. Recombinant DNA: A Short Course by Watson, Towne, and Kurtz or Guide to Protein Purification by Deutscher) is necessary to get a good yield from these courses. Experience with running these courses for eight years now indicates that both students with and without any prior hands-on experience with molecular techniques find these courses useful. Experienced students benefit from in-depth interaction with the instructors; novices learn the realities behind the innocent looking protocols. The result obtained in the Carolina Workshops can be considerable. In a recent Workshop one researcher generated 21kb of sequence data in the Sequencing Workshop, another created 7 cDNA libraries in the cDNA Cloning Workshop.

To apply, send a curriculum vitae and a brief letter describing your research interests and their relevance to the Workshop for which you apply. Applicants should contact the program office as soon as possible. Please indicate your complete mailing address and telephone number. Full consideration will be given to applications received for the "Protein Workshop" by MARCH 1, or "cDNA Workshop" by APRIL 1.

For further information or to apply, contact:
Dr. Philip L. Carl, Interim Director
University of North Carolina at Chapel Hill
Program in Molecular Biology & Biotechnology
101 MBBRL Building CB 7100 S
Chapel Hill, North Carolina 27599-7100
TELEPHONE (919) 962-8920, FAX (919) 966-6821
POSITIONS OPEN

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NIH)

The Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, invites applications for a SENIOR POSTDOCTORAL, tenure-track position (salary approximately $40,000, depending on experience). The overall emphasis of the laboratory is the understanding and cell mechanisms of acotyosin-dependent cell motility. The applicant must hold a Ph.D. and have experience in other non-muscle cells and biochemistry and recombinant DNA techniques. Salary range begins at $23,000 per year plus medical insurance.

Apostiion is available to pursue studies in the structure and function of lipid domains in membrane current efforts are focused on regulation of cholesterol domains in synpatic plasma membranes and how chronic high cholesterol affects cholesterol domains. Experience in receptor pharmacology, signal transduction, protein purification desirable but required. Current interests and opportunities.

Apostiion is available to pursue studies in the structure and function of lipid domains in membranes. Current interests are focused on regulation of cholesterol domains in synaptic plasma membranes and how chronic high cholesterol affects cholesterol domains. Experience in receptor pharmacology, signal transduction, protein purification desirable but required. Current interests and opportunities.

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The Upjohn Company

POSTDOCTORAL RESEARCH SCIENTIST PROGRAM

The Upjohn Company, a recognized leader in pharmaceutical research and development, announces The 1991 Postdoctoral Research Scientist (PRS) Program for our Upjohn Laboratories Division. This Program reflects Upjohn's commitment to encourage creative and innovative science, to stimulate new scientific techniques and concepts and to provide an excellent training environment for our PRS scientists.

Applications are invited from new or recent doctorates in science, medicine and/or veterinary medicine having a strong record of academic and scientific excellence in research. As part of our PRS Program you will apply your science and talents in one or more of the following areas: biochemistry, biostatistics, cell biology, immunology, medicinal chemistry, molecular biology, pharmacology, physiology, organic chemistry, toxicology or virology.

MOLECULAR and CELL BIOLOGY RESEARCH (Specialty Code 5736-HA)

Participate in T-Cell research projects or therapeutic studies in one of these specialty areas: herpes, HIV, and other viral diseases, central nervous system, or animal respiratory system.

DISCOVERY RESEARCH—GENERAL (Specialty Code 5737-HA)

Research opportunities include: cancer/molecular biology, cardiovascular diseases, diabetes, cholesterol studies and pulmonary research.

MEDICINAL CHEMISTRY (Specialty Code 5735-HA)

Chemistry or biochemistry background and participate in the design of antiviral drugs, cns active compounds, or the development of new organic chemistry techniques.

PRECLINICAL and TOXICOLOGICAL RESEARCH (Specialty Code 5738-HA)

T-lymphocyte research, lipid projects or toxicity assessment studies, or perform research on sustained release dosage forms.

BIOSTATISTICS RESEARCH (Specialty Code 5739-HA)

Assess and develop new experimental designs.

Appointments are for one year, renewable for a second year. The Upjohn PRS Program is designed to provide a top-quality research experience and the opportunity to publish scientific results with an excellent salary and benefits package offered. Upjohn Laboratories offers a stimulating, multi-disciplinary research environment at our modern facilities located in Kalamazoo, a southwestern Michigan community located midway between Chicago and Detroit. Our region provides an outstanding mix of cultural and recreational pursuits and a reasonable housing cost market. Qualified candidates are invited to forward their curriculum vitae and cover letters describing education, research experiences, publications, interests, objectives and availability dates to:

THE UPJOHN COMPANY
CORPORATE RECRUITING
POSTDOCTORAL RESEARCH SCIENTIST PROGRAM
7000 PORTAGE ROAD
KALAMAZOO, MI 49001-0199

Please refer to one of the above specialty codes in your cover letter. A number of PRS positions are currently open with most appointments being decided by mid-year. We are an Equal Opportunity Employer M/F.

OUR COMMITMENT TO SCIENTIFIC EXCELLENCE CONTINUES...
DEAN

School of Natural Resources
The University of Michigan

Applications and nominations are invited for the position of Dean of the School of Natural Resources at the University of Michigan. The Dean is the chief academic and administrative officer of the School and reports directly to the Academic Vice President. The School of Natural Resources is an interdisciplinary, research-oriented, professional school, focusing on research and the development of policies and management programs that promote the conservation, protection, and sustainable use of natural resources. In addition, the School educates practitioners and researchers who will seek these ends. The School’s activities include instruction at the undergraduate, master’s, and doctoral levels and an active research program. Faculty interests are diverse: Resource Ecology and Management, Resource Policy and Behavior, and Landscape Architecture. The School is committed to an integrative, interdisciplinary, problem-solving approach in collaboration with related disciplinary departments and professional schools.

The Dean provides leadership in program planning, development, and evaluation. Qualifications should include an earned doctorate, a distinguished record appropriate for a tenured appointment in the School, and the ability to generate funds for programs at the local, state, national, and international levels. The committee will begin reviewing candidate files on February 4, 1991. Applications and nominations should be sent to: Professor Burton Barnes, Chair, School of Natural Resources, Dean Search Advisory Committee, The University of Michigan, 520 E. Liberty, Ann Arbor, MI 48104-2210. A non-discriminatory, affirmative action employer.

UNIVERSITY OF CALIFORNIA — DAVIS
DIRECTOR
CENTER FOR NEUROBIOLOGY

The University of California at Davis invites applications and nominations for the position of Director of the Center for Neurobiology. The newly established Center for Neurobiology is a campuswide unit involving faculty from five different colleges/schools on the Davis campus. The Center provides research space, seminar programs, support for graduate students, postdoctoral associates and distinguished visitors, and will serve as the administrative home for the campuswide Graduate Group in Neurobiology. The Davis campus has made a major commitment to the further development of neurobiology through the Center; following the hiring of the Director, the campus is prepared to make ten additional appointments associated with the Center over a five year period.

We seek as Director an outstanding individual in the field of integrative neurobiology, with interests and abilities that are sufficiently broad to provide intellectual and administrative leadership for all neurobiologists on the campus. The specific area of the Director’s research could range from a systems approach to cellular or molecular neurobiology. The former could focus on such areas as cognitive neuroscience or neuroethology, while the latter might emphasize cellular or molecular aspects of neuronal communication or development. The Director’s position involves a faculty appointment at the professional level in an academic department in one of the colleges/schools with programs in neuroscience. The appointment carries an administrative stipend.

The University of California is interested in candidates who are committed to the highest standards of scholarship and professional activities and are committed to the development of a campus climate that supports equality and respect for differences based on gender, cultural ethnicity, level of disability and sexual preference. This position will remain open until filled. To assure fullest consideration, applicants should send a letter of interest or nomination, curriculum vitae, and the names of at least three references by 15 March 1991.

Leo M. Chalupa, Ph.D., Acting Director
Dean’s Office, Division of Biological Sciences
University of California, Davis, CA 95616
(916) 752-6764

POST-DOCTORAL OPPORTUNITY
(Richland, WA)

Battelle, Pacific Northwest Laboratories, the preeminent multiprogram national laboratory for environmental technology development, is currently looking to fill a 2 year appointment for its Environmental Microbiology Group.

Research focus will be on the expression of previously cloned biodegradative enzymes and redesigned biodegradative enzymes in bacteria isolated from aquifer sediments, for the purpose of expanding their substrate range for degradation of environmental contaminants.

Candidate should have experience in enzyme purification, determining enzyme activity and kinetic constants, DNA manipulations and sequencing, and site-directed mutagenesis using PCR. Experience with bacterial biodegradative systems is desired. Selected candidate will have the opportunity to work within a multidisciplinary collaboration which includes the Environmental Microbiology Group (within the Environmental Sciences Research Center) and the Biophysics/Molecular Modeling and Simulation Group (within the Molecular Sciences Research Center).

Send vitae, college transcripts, and the names of three references to: Battelle, Pacific Northwest Laboratories, Dept. 1009, P.O. Box 1406, Richland, WA 99352. FAX: (509) 376-9099. An Equal Opportunity Employer. U.S. citizenship required.

Scientist/Sr. Scientist
ES Technology

At Genentech, our success as a biotechnology leader is a result of state-of-the-art equipment combined with a progressive environment and, most importantly, the best people. Currently, we have a unique opportunity for a Scientist/Sr. Scientist to establish a laboratory for research on homologous recombination in ES cells.

In this group, which already has technical support staff and facilities budgeted, the primary focus will be to develop and extend this exciting technology. Ample opportunities exist for collaboration in specific disease areas. Ph.D. and related postdoctoral experience is essential.

Genentech offers excellent benefits as well as the opportunity to make significant scientific contributions. For immediate consideration, please send your resume to Wendy Reitherman, Genentech, Inc., Human Resources Dept, SDH, 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

Genentech, Inc.
Interdisciplinary Scientist
(GS-13)

The National Institute of Environmental Health Sciences (NIEHS) is one of the member Institutes of the National Toxicology Program (NTP). The Program was established by the United States Department of Health and Human Services to coordinate and manage the Department's toxicology programs which develop scientific information necessary to protect the health of the public from exposure to hazardous chemicals. The NTP is responsible for the design, conduct and evaluation of long term toxicology and carcinogenicity studies. This is a large and dynamic program being responsible for the conduct of over three hundred chronic studies since its formation in 1978. The long-term animal studies have been pivotal in hazard identification and have been extensively used in risk management.

In order to improve the overall design, conduct and evaluation of the long term studies, the Chemical Carcinogenesis Branch in the NIEHS is expanding its effort in the area of toxicokinetics and is recruiting a scientist to lead this effort. This position offers the opportunity for the incumbent to play a significant role in changing the design and conduct of two-year rodent studies. Since these studies are widely used by regulatory and international agencies for setting standards, this position offers the opportunity to have an impact on how potential carcinogens are identified and managed.

The successful candidate will have a Ph.D., D.V.M. or M.D. degree and at least three years of independent research experience related to toxicokinetics. Expertise in biochemical and analytical chemistry would also be helpful. The initial appointment will be temporary with the possibility of conversion to a permanent appointment. Salary range is $44,348-$57,650. Citizens as well as non-citizens may apply.

For prompt consideration interested candidates should submit a letter, curriculum vitae, and the names of three references by February 28, 1991 to:

Ms. Lisa Fletcher
NIEHS Personnel Office
Code HVN26
P.O. Box 12233
Research Triangle Park, NC 27709
(919) 541-7811

An Equal Opportunity Employer
MICROBIOLOGIST
The Department of Biology at the University of Northern Iowa invites applications from individuals with the Ph.D. degree for a tenure-track assistant professor position effective August 1991. Teaching responsibilities will include general microbiology, applied microbiology, and participation in the University General Education program. An advanced course in one's specialty also may be offered. Specific research area in microbiology is open, but preference is given to an ecologic orientation. The research should involve participation by graduate (M.A.) and undergraduate (B.A. and B.S.) students. Post-doctoral teaching and/or research experience preferred. The department expects excellence in both teaching and research. Salary is competitive and commensurate with experience and qualifications. Applicants should send curriculum vitae, transcripts, statement of interests and goals in both teaching and research, relevant reprints, and three letters of recommendation. For full consideration application materials should be received by February 18, 1991. Send application and/or letters of inquiry to:

Dr. Alan R. Orr
Professor and Chair Search Committee
Department of Biology
University of Northern Iowa
Cedar Falls, IA 50614–0421
(Fax No.: 319-273-2893)

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EDUCATOR AND EMPLOYER. MINORITY PERSONS, WOMEN, VIETNAM ERA VETERANS, AND DISABLED PERSONS ARE ENCOURAGED TO APPLY.

HUMAN GENETICS AT THE UNIVERSITY OF CALIFORNIA LOS ANGELES
The Laboratory of Biomedical and Environmental Sciences (LBES) seeks a Director with an established program in human genetics/genomics. The Laboratory, which is funded by a contract from the Department of Energy to UCLA as well as by other sources, currently has three programmatic components: Biomolecular and Cellular Sciences, Nuclear Medicine, and Environmental Biology. The Director will have the opportunity to establish a fourth component in Human Genetics, which may include additional appointments. Candidates are expected to be at the cutting edge of the discipline and to have outstanding leadership qualities. The position carries a tenured academic appointment, at a level commensurate with qualifications, in any basic science or clinical department of the UCLA School of Medicine that would be appropriate for the Director's teaching and research interests. Applications (with CV and bibliography) and nominations should be sent to:

Dr. Elizabeth F. Neufeld, Chair
Search Committee, Director of LBES
Department of Biological Chemistry
University of California
Los Angeles, CA 90024–1737

The University of California is an Equal Opportunity Employer. Applications from women and minorities are strongly encouraged.

DIRECTOR, CENTER FOR AGING UNIVERSITY OF ALABAMA AT BIRMINGHAM
The Director is expected to be a scholar, scientist, and administrator with outstanding competence and wide scholarly recognition. He/she is charged with managing the resources of the Center for Aging for the particular purposes of research, service and teaching. The Center Director reports to two Vice Presidents, one for Academic Affairs and one for the Medical Center, to assure coordination of academic programs in Geriatrics and Gerontology across the UAB. Area of specialization is open, and applicants from all disciplines in Gerontology and Geriatrics are encouraged.

The Director will advance Center goals which are expected to be multidisciplinary in nature and University-wide in their implementation. The Director is responsible for the quality of all aspects of the UAB's Center for Aging and is expected to establish standards for performance for the Center through active leadership. Appropriate associate directors can be appointed, so that all aspects of Center involvement will be pursued actively.

The Center for Aging at the University of Alabama at Birmingham is involved with all aspects of University operations. Major long-term goals are for the Center to be outstanding among national peers and for UAB to be recognized as outstanding in the fields of Gerontology and Geriatrics. The Center is expected to have primarily a research orientation which is interdisciplinary and includes basic and applied research activities in biomedical and social/behavioral areas.

Applications will be reviewed beginning February 1, 1991 and will be accepted until the position is filled. Address responses to David G. Warnock, M.D., Chairman, Search Committee, N.R.T.C., UAB Station, Birmingham, Alabama 35294. The University is an Equal Opportunity/Affirmative Action Employer.

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Pharmaceutical Protein Chemist
This scientist will lead research involving small protein freeze-dry formulation and stability studies for parenteral drug development. Practical experience in the area of formulation, freeze-dry process development and characterization of freeze-dried protein drugs is essential. Working knowledge of GMP necessary to meet compliance criteria for IND submission is preferred. Candidate must have a Ph.D. and several years of industrial experience.

Amylin offers a stimulating and challenging opportunity to participate in a new area of biomedical science, as well as an excellent compensation and benefits package which includes equity participation. Individuals with appropriate experience and a desire to broaden their career opportunities should reply to: Audrey H. McGovern, Human Resources Administrator, Amylin Corporation, 9373 Towne Centre Drive, Suite 250, San Diego, CA 92121.

Amylin Corporation is an equal opportunity employer.
The Geneva molecular biology research institute of one of the world's most successful healthcare groups is recruiting a **MOLECULAR BIOLOGIST**

to investigate the molecular mechanisms and the genes involved in cell-cell signalling following cell contact.

The ideal applicant will have a PhD and several years of postdoctoral research experience. Previous experience with mechanisms of cellular adhesion and/or cell signalling would be a distinct advantage.

The Glaxo Institute for Molecular Biology carries out long term research to support the company-wide effort to discover effective new medicines. It provides a dynamic research environment, and encourages the publication of scientific results as well as collaborative projects with academic groups.

We offer an excellent salary and benefits package, and opportunities for career development in one of the most attractive parts of Europe.

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

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ANNOUNCES A NEW CANOPY-RAFT ASSIGNMENT. THE ASSIGNMENT IS SCHEDULED FOR SEPTEMBER AND OCTOBER 1991, AND WILL TAKE PLACE IN THE AFRICAN RAIN-FOREST.

SCIENTISTS INTERESTED IN PARTICIPATING IN SUCH AN INTERDISCIPLINARY OPERATION SHOULD CONTACT THE ORGANIZERS BEFORE THE END OF FEBRUARY 1991.

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HALLE F.
PASCAL O.
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INSTITUT DE BOTANIQUE
163, RUE AUGUSTE BROUSSONET
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Agricultural Research Service
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POSTDOCTORAL RESEARCH AFFILIATE, MOLECULAR BIOLOGIST
Phototransformation Research Program, National Renewable Energy Laboratory (NREL), Golden, CO 80401-2193. Telephone: 720-582-2250. Fax: 720-582-2259. E-mail: william.gastro@nrel.gov.

A postdoctoral position is available for investigation of novel molecular mechanisms that regulate the growth of small cell lung cancer. The successful applicant will work on projects investigating the role of small cell lung cancer in the development of novel molecular pathways that regulate growth and survival. The successful applicant will have a Ph.D. in molecular biology, biochemistry, or a related field. The candidate must have a strong background in molecular biology and experience with small cell lung cancer. The successful applicant will be part of a multidisciplinary team that works in collaboration with other labs at NREL, as well as with other institutions and organizations. The successful applicant will be expected to publish results in peer-reviewed journals.

POSTDOCTORAL POSITION
E-mail: j.rickert@berkeley.edu

A postdoctoral position is available immediately at the University of California, Berkeley, in the laboratory of Dr. John Rickert. The successful applicant will work on projects investigating the role of small cell lung cancer in the development of novel molecular pathways that regulate growth and survival. The successful applicant will have a Ph.D. in molecular biology, biochemistry, or a related field. The candidate must have a strong background in molecular biology and experience with small cell lung cancer. The successful applicant will be part of a multidisciplinary team that works in collaboration with other labs at Berkeley, as well as with other institutions and organizations. The successful applicant will be expected to publish results in peer-reviewed journals.

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POSTDOCTORAL RESEARCH PROGRAM

Cetus Corporation, located in the San Francisco Bay Area, is a leading biotechnology company. We maintain an academically stimulating environment where publication is encouraged. Cetus has an active seminar program and interacts with neighboring universities. As part of our continued commitment to research excellence, we have established exceptional opportunities for Postdoctoral Fellows in our Research and PCR Divisions.

**Receptors** (Michael Innis) Genetic, molecular and biochemical approaches to studying receptor/effector interactions. Projects include cloning and expressing novel receptors, identifying novel ligands, defining disease-associated receptor mutations, and developing ligand-screening systems in yeast, insect and mammalian cell systems.

**Protein Interactions** (Robin Clark) Expression of proteins and protein complexes in insect cells for the eventual development of inhibitors of cell adhesion, signal transduction and viral replication.

**Inflammation Cell Biology** (David Liu) Study the interaction of leukocytes and endothelial cells by using molecular and cellular biology techniques, focusing on mechanisms of cell activation and signal transduction.

**Recombinant Antibodies** (Lou Houston) Position funded by the National Cooperative Drug Discovery Group (NCI) to investigate novel immunotoxins derived from recombinant single-chain antibodies produced in E. coli.

**Vascular Cell Biology** (Raymond Ivatt) Study the regulation of vascular smooth muscle behavior with a focus on wound healing.

**Random Peptides** (James Devlin) Using recombinant bacteriophage peptide libraries, characterize and optimize small peptides that interact with cell-surface receptors.

**Acute Inflammation/Septic Shock** (Abla Creasey) Using established animal models, study the roles of cytokines and proteins of the complement/coagulation cascades in septic shock.

**Peptide Chemistry** (Danute Nitecki) Design and synthesis of specifically modified peptides, cyclic peptides, and peptides attached to polymers. Development of new crosslinking, labeling, and protein modification reagents.

**Novel Regulatory Proteins** (Kirston Koths) Purification, characterization and cloning of proteins involved in cellular interactions and signaling, leading to the development of agonists and antagonists.

**Molecular Epidemiology of Papillomaviruses** (Michele Manos) Study the biology and epidemiology of genital HPVs by using PCR technologies. Projects include analysis of novel HPVs, retrospective and prospective cancer studies, and defining cell and viral factors in cervical neoplasia.

**Molecular Analysis of Human Retroviruses** (John Sninsky) Sequence variability, viral resistance and pathogenesis are being investigated. New members of the human retrovirus family and endogenous elements are also studied.

**Genetics of Autoimmune Diseases** (Henry Erlich) Study the molecular basis of susceptibility to autoimmune diseases in humans, focusing on both the MHC and the T-cell receptor genes.

**Molecular Markers of Tumorigenesis** Innovative strategies are being used to dissect, quantitate, and diagnose events effecting oncogenesis in a variety of human cancers.

**Thermostable DNA Polymerases** (David Gelfand) Biophysical and enzymatic characterization of DNA polymerases from thermophilic and hyperthermophilic microorganisms. Study structure, function, fidelity and develop novel PCR methodologies. (Spring 1992)

Cetus provides excellent benefits and relocation. Interested candidates should send a CV with the names of three references, indicating area of interest, to: Cetus Corporation, Department of Human Resources PDP, 1400 Fifty-Third St., Emeryville, CA 94608. We are an Equal Opportunity Employer.
Vascular Biology Researchers

Genentech, Inc. is a biotechnology company focused on the discovery of human therapeutic products. We are expanding our Cardiovascular Research division to increase research in the underlying mechanisms of vascular disease. Our goal is to discover and develop clinically useful factors to treat atherosclerosis or chronic hypertension.

Both positions will involve in vivo, whole animal research in a multi-disciplinary group. Smooth muscle proliferation, vascular damage, endothelial cell function and hypertension are areas of interest. Prior in vivo experimental work with models of these diseases is ideal. However, experience in related areas, such as tissue culture, will be considered. Training in the areas of Pharmacology, Physiology or Medicine is desirable.

Scientist
We require a Ph.D. or M.D. and at least 2 years' postdoctoral research experience. You must also have a proven record of creative, original research.

Research Associate
In this position, you must have a BS in Biology or a related field, a good understanding of vascular biology and experience with techniques commonly used for in vivo and in vitro research.

We actively encourage publication as well as internal and external research collaborations. Additionally, we have a well-established post-doctoral training program. Our facilities are located in a new research building overlooking the San Francisco Bay and are in close proximity to three major universities.

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

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Requires an MS, PhD in Pharmacology/Toxicology or related biological science with 2-5 years' experience. You must also possess strong communication skills, an innovative outlook and the ability to work well on a team.

For consideration, please call Darlene Markovich at (415) 494-5214; or fax your cv/resume to (415) 494-5151; or send it to: ALZA, Employment Department, 950 Page Mill Rd., P.O. Box 10950, Palo Alto, CA 94303-0802. EOE.

Genentech, Inc., a leader in the field of biotechnology, currently has an exceptional opportunity for a Postdoctoral Scientist in our Neurobiology department.

This position is available to study the structure, function and mechanism of action of neurotrophic factors and of neurogenic receptors. Interested candidates should have experience in molecular biology and/or cellular neurobiology.

Genentech offers an extensive benefits package as well as the opportunity to make a significant contribution to our organization. For immediate consideration, please send your resume to Dr. Arnon Rosenthal c/o Yvonne Davino, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. We promote and actively support affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

Genentech, Inc.
POSITIONS OPEN

POSTDOCTORAL POSITION

NIH funding available to study protein structure-function and regulation of Mg2+ transport systems of Salmonella typhimurium including analysis of Mg2+ and O2 dependence of promoters, TrpP40, TrpA, and epinephrine analysis of membrane topology, and directed mutagenesis of transport proteins. Please send curriculum vitae and names of three references to: Dr. M. Maguire, Department of Pharmacology, Case Western Reserve University, Cleveland, OH 44106. Application/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP. Available for study of mechanisms underlying cell differentiation. Limited to those with recent Ph.D. Prefer background in molecular biology. Stanford is an Equal Opportunity Employer through Affirmative Action. Send curriculum vitae and letters of reference to: Frank E. Stockdale, M.D., Ph.D.

Stanford University School of Medicine, 2111
Stanford, CA 94305–5306

POSTDOCTORAL FELLOW/RESEARCH ASOCIATE. Position open 1 April 1991 to participate in research supported by the National Eye Institute dealing with the biochemistry of receptors in the visual system. Training in biochemistry required. Send curriculum vitae and names of three references to: Dr. Edward Kean, Eye Research Laboratory, Room 653, Wearn Building, Case Western Reserve University, Cleveland, OH 44106. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP

MOLECULAR BIOLOGY: ANTARCTIC MICROBES

This postdoctoral will emphasize the isolation and characterization of psychrophilic phototrophic microbes from Antarctica. The ribulose-1,5-bisphosphate carboxylase/oxygenase will be isolated and the genes sequenced to determine relatedness to psychrotrophic species. The successful candidate will have experience in molecular sequencing techniques. Applicants should send curriculum vitae and three letters of reference to: Dr. J. Robert West, Department of Biological Sciences, University of Cincinnati, OH 45221–0006 by 1 March 1991.

POSTDOCTORAL FELLOW

Postdoctoral position is immediately available with an active group studying the mechanisms of growth factor and proto-oncogene intracellular signaling, development of novel assays for signal transduction, and targets. Position offers excellent opportunities for collaboration and development of independent research ideas while in a research environment with modern, well-equipped facilities. Stipend is based on qualifications and is highly competitive, with excellent benefits. Suitable for a Ph.D., M.D., or M.V.M. with a strong background in biochemistry, cell biology, pharmacology, etc. Send current curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. M. B. Stemerman, Department of Medicine, New York Medical College, Valhalla, NY 10595. An Equal Opportunity/Affirmative Action Employer.

CLINICAL/BASIC NEUROSCIENCE POSTDOCTORAL FELLOWSHIPS. University of Pittsburgh Medical Center. NIA-funded program in behavioral neuroscience/geriatric psychiatry for neurologists, psychiatrists, or internists. Areas include delirium, dementia, normal aging, psychiatric aspects of neurologic disease, and pharmacology. Basic research opportunities in NMR imaging and spectroscopy, neurotrophic factors and brain injury, and others. Superb preceptors, facilities, and collaborations available. BASIC RESEARCH POSTDOCTORAL FELLOWSHIPS. In neurotoxic and membrane responses to brain injury. Experience in molecular biology, animal culture, and human brain. Immunocytochemistry experience highly desirable; experience in small animal surgery, cell culture, or molecular biology valuable. Must be U.S. citizens or permanent residents. Send curriculum vitae and three references to: Steven T. DeLezeg, Program Director, University of Pittsburgh, Alzheimer's Disease Research Center, 3600 Forbes Avenue, Suite 400, Pittsburgh, PA 15213. Telephone: 412-647-2160. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

HARVARD SCHOOL OF PUBLIC HEALTH INTERDISCIPLINARY PROGRAMS IN HEALTH AND ENVIRONMENT

STAFF SCIENTIST/RESEARCH FELLOWS

The Program in Environmental Health and Public Policy invites applications from promising graduates of advanced degree programs in environmental health and social sciences. The program focuses on the scientific and analytic foundations for environmental decisions. Fellows conduct basic scientific research and participate in applied policy projects. Recently the program has emphasized the role of risk analysis in environmental decision making. Topics of special interest include use and validation of scientific judgment in risk assessment; improving estimates of exposure/dose, design, and interpretation of bioassays; and use of decision analysis in risk management.

Fellows will be appointed for a term of 1 year starting 1 September 1991. Awards may be renewed. Application deadline: 15 April 1991.

For information, write to:

Professor John S. Evans
Attention: IPH Fellowships
Harvard School of Public Health
200 Longwood Avenue
Boston, MA 02115
Telephone: 617-432-1258

POSTDOCTORAL FELLOW. Position open for postdoctoral fellow in biochemistry, immunology, or pharmacology. Work involves ELISA and separation science of venom components. One-year appointment with the possibility of a second year upon mutual agreement. Salary: $25000 plus for an interview. Send résumé to: Dr. Joseph W. Burnett, University of Maryland Hospital, Department of Dermatology, 405 Redwood Street, 6th Floor, Baltimore, MD 21201.

ARNOLD RESEARCH FELLOWSHIPS

The Arnold Arboretum of Harvard University announces the availability of fellowship appointments (Putnam or Merrill Fellows or Arnold Arboretum Associate positions) for variable, renewable duration for specific research projects utilizing the landscapes (335 acres) or the library (250,000 volumes), herbarium (2,600,000 specimens), and the network of research automata, and analysis of visual systems. Advanced supercomputer facilities are available.

Institute Fellows are appointed for 2 years with the possibility of renewal and a stipend that depend on qualification and experience. Applicants should be at the postdoctoral or assistant professor level, and must have a background in experimental or theoretical neuroscience or related fields.

The NSI invites applications for positions as INSTITUTE FELLOWS in Theoretical Neurobiology. The NSI supports an inhouse research program dedicated to developing experimentally testable theoretical models of neural systems. Current models include simulations of pharmacological effects on neuronal networks and analysis of network automata, and analysis of visual systems. Advanced supercomputer facilities are available.

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The NSI is an independent organization located on the campus of The Rockefeller University in New York City. The NSI serves as the home of the Neurosciences Research Program and is an international center of study and research on neurobiology and neurochemistry. Fellows have opportunities to use the Institute's extensive facilities and to interact with visiting scientists.

Deadline: 1 March 1991 to: Dr. Robert E. Cook, Director, Arnold Arboretum, 125 Arborway, Jamaica Plain, MA 02130.

THEORETICAL NEUROBIOLOGY

The Neurosciences Institute (NSI) invites applications for positions as INSTITUTE FELLOWS in Theoretical Neurobiology. The NSI supports an inhouse research program dedicated to developing experimentally testable theoretical models of neural systems. Current models include simulations of pharmacological effects on neuronal networks and analysis of network automata, and analysis of visual systems. Advanced supercomputer facilities are available.

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Deadline: 1 March 1991 to: Dr. Robert E. Cook, Director, Arnold Arboretum, 125 Arborway, Jamaica Plain, MA 02130.

POSTDOCTORAL FELLOWSHIP

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY OF THE EXTRACELLULAR MATRIX

Position available July 1991 to study the structure and function of fibrillin and other ECM macromolecules. Research requires use of recombinant DNA techniques. Strong background in molecular biology is desirable. This position is in a department composed of six modern laboratories and an electron microscope facility, all directed toward different aspects of connective tissue research. Salary: $25,000 plus comprehensive benefits. Address all correspondence to: Lawrence Kerley, Department of Biology, Oregon State University, Corvallis, OR 97331.

STANFORD UNIVERSITY

POSTDOCTORAL FELLOWSHIPS

Postdoctoral fellowships are available for basic research on the molecular and cellular aspects of gastrointestinal disease. Faculty and their current interests include:

Dr. J. Cartwright: Molecular mechanisms of oncogene activation in intestinal epithelia; role of proto-oncogene deletion factors.

Dr. A. Lowe: Protein sorting in the exocrine pancreas; organellar biogenesis.

Dr. B. Omari: Characterization of cell surface epitopes for membrane protein export.

Stipends will be funded by the NIH training grant program. The requirements are a Ph.D. or M.D. and U.S. citizenship or permanent residency. Please send curriculum vitae and approximate date of availability to: Peggy George, Division of Gastroenterology, S-069, Stanford University School of Medicine, Stanford, CA 94305–5100.

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INDOOR AIR EXPOSURE AND RISK ASSESSMENT RESEARCH

The Lawrence Berkeley Laboratory's Indoor Environment Program is seeking highly qualified scientists for the following positions:

STAFF SCIENTIST II, 100% (C6164): Direct studies of human cell mutations resulting from environmental exposures. Set up and perform human mutation assays using HLA-A, -B, -C, and -DR typing methods. Help identify suitable cohorts for study, and organize exposure assessment protocols. Prefer Ph.D. in environmental health/genetic toxicology or equivalent. New Ph.D.s will be considered together with experienced scientists in biomonitoring and use of human biosays for risk assessment. Experience in carrying out studies on human populations in the field, training in chemical exposure assessment, and industrial hygiene experience.

STAFF SCIENTIST II, 75% (C6161): Conduct theoretical research in toxic risk assessment. Develop and implement mathematical models of deposition, metabolism, and toxicity for indoor organic air pollutants and environmental pollutants. Prefer Ph.D. in biology and toxicology. For equivalent exposure, demonstrate expertise in computer modeling of pharmacokinetics/pharmacodynamics and risk assessment for organic pollutants. Experience with mainstream/supercomputer environments and high level programming/languages. Familiarity with indoor air pollution and exposure to toxic air pollutants desirable. Supervise graduate students and postdoctoral fellows working on the project, prepare and publish papers in refereed archival journals, and generate funding to establish new research projects. Ability to identify needed research to advance research projects. Strong research background and record of publications in the research areas described above.

Competitive salary commensurate with experience, plus comprehensive benefits. Please send resume, including publication list, and names of references (must indicate Job C6164 or C6161) to: Employment Office, Lawrence Berkeley Laboratory, 90-1042, #1 Cyclotron Road, Berkeley, CA 94720. Attention: M. A. Holman. Telephone: 415-486-5398. An Equal Opportunity Employer.

LAWRENCE BERKELEY LABORATORY

482

SCIENCE, VOL. 251
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PHYSICIAN

The National Heart, Lung, and Blood Institute is recruiting for a physician who is Board-certified in cardiology and is an expert in carrying out studies to determine forearm vascular blood flow and resistance. The candidate should have experience in performing forearm plethysmography, in infusing drugs intraarterially, and in performing treadmill and bicycle exercise testing. The candidate must also have expertise in the mechanisms responsible for the control of vascular tone, including the role of the endothelium. Salary range: $45,000 to $60,000. Contact: Dr. Stephen Epstein, Cardiology Branch, Building 10, Room 7B15, 9000 Rockville Pike, National Institutes of Health, Bethesda, MD 20892.

NIH is an Equal Opportunity Employer.

ELECTROPHYSIOLOGIST

The Cardiology Branch of the National Heart, Lung, and Blood Institute, National Institutes of Health, is recruiting for an electrophysiologist to perform clinical and research investigations. The need for a senior, experienced electrophysiologist is essential as many high-risk patients, including those with hypertrophic cardiomyopathy (HCM), will be continuously investigated. The candidate must also be expert in performing echocardiographic investigations and exercise studies and must be intimately familiar with molecular genetics and technological advances to gene mutation as a cause of HCM. Annual starting salary: $76,000 to $101,500. Applicants must hold M.D. degree. Send curriculum vitae and names of three references to: Dr. Stephen Epstein, Cardiology Branch, Building 10, Room 7B15, 9000 Rockville Pike, National Institutes of Health, Bethesda, MD 20892.

NIH is an Equal Opportunity Employer.

SENIOR ENTOLOGIST/INSECT PHYSIOLOGIST. 15K–Mountain View Research Center (5K–MCRC), an agrochemical research facility located in Sunnyvale, California, has an immediate opening for a Ph.D. entomologist with postdoctoral experience in insect physiology. The position requires the design and implementation of innovative assays to assess the effects of novel bioactive compounds against insect pests. Candidates must have expertise in the dissection and preparation of insect organs and in the use of RIA and chromatographic techniques.

To be considered for this position, please send your curriculum vitae and salary requirements, list of publications, and the names, addresses, and telephone numbers of three references to: Dr. James A. Klocke, 15K–MCRC, 1195 West Fremont Avenue, Sunnyvale, CA 94087.

WILDLIFE ECologist

The Center for Wildlife Ecology (CWE) of the Illinois Natural History Survey (INHS) invites applications from Ph.D.-level scientists for two full-time, state-supported research positions at the assistant level. Successful candidates will be expected to develop rigorous, externally funded research programs. For one position, we seek a POPULATION ECologist with strong quantitative skills. Preference will be given to candidates with backgrounds in statistics, modeling, and/or genetic analysis. The successful candidate will be expected to develop an autonomous research program involving field investigations in an area of special expertise and to collaborate with other staff members. For the second position, we seek a MAMMAL ECologist to do field studies of population ecology. The INHS is located on the campus of the University of Illinois at Urbana-Champaign, and several staff hold academic appointments and advise graduate students. The staff exceeds 225, and the center is supported by legislative grants to perform research relating to the biological resources of Illinois. The CWE also maintains scientific staff at two other field stations. For full consideration, all application materials should be received by 1 March 1991. Qualified applicants should send a cover letter, resume, copies of representative publications, a brief statement of future research goals, and have three letters of reference sent to: Ms. Jacqueline Sanders, Personnel Officer, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820. Telephone: 217-244-7790. The Illinois Natural History Survey is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.

Positions open

ASSISTANT RESEARCH SCIENTIST. Postdoctoral position available in the laboratory of Dr. Emanuel Miller, Department of Psychiatry, to conduct research in CNS molecular pharmacology. Experience in two or more of the following is desired: cell culture, immunocytochemistry, gel electrophoresis, second messenger assays (CAMP or PI), molecular biology techniques (blotting, transfection, etc.). Send curriculum vitae to: Ms. Singh, Personnel Department, New York University Medical Center, 550 First Avenue, New York, NY 10016. An Equal Opportunity Employer, M/F.

ASSOCIATE RESEARCH SCIENTISTS. Two positions available immediately to study: (i) cellular oncogenes in chemical carcinogenesis and (ii) molecular toxicology and evolution in fishes. Candidates must have Ph.D.; experience in molecular biology and/or cell biology is desirable. Send curriculum vitae and names of three references to: Dr. J. S. Garte, Institute of Environmental Medicine, New York University Medical Center, A. J. Lanza Research Laboratories, Long Meadow Road, Tuxedo, NY 10987. Equal Opportunity Employer.

RESEARCH PLANT PATHOLOGIST. Position offered in Athens, Georgia. The position serves as PROJECT LEADER for Diseases of Southern Forests Unit. Project mission is to develop effective controls for damaging diseases of southern pines in plantations, seed orchards, and nurseries. Specific problems assigned are: (i) to identify new sources of resistance, including as many field populations as possible; (ii) to increase understanding of virulence potential in fungus and genetic and physiological basis of resistance in tree hosts; and (iii) to gain basic knowledge on biology of dogwood anthracnose and influence of environmental factors on disease development. Incumbent will develop personal research assignment within the area of interest to the Institute and serve as an adviser and consultant on rust diseases, of pines, pitch canker, and seed orchard diseases, to federal, state, university, and industrial organizations. Will also serve as Southeastern Station’s technical authority on all disease problems on forest trees in the Southeast. Applicants should have Ph.D. in plant pathology with demonstrated ability to provide technical and administrative leadership to research program of considerable size and scope.

Starting salary will range from $50,342 to $65,444 per year.

Qualified individuals should send one-page résumé and/or SF-171, Application for Federal Employment, to: Nathan Presley, Attn: Dr. Stephen Garte, SE-D–26-90, Southeastern Forest Experiment Station, P.O. Box 2680, Asheville, NC 28802. Telephone: 704-257-4380. Recruitment ends 15 February 1991.

RESEARCH SCIENTIST

Research scientist required to supervise and execute animal studies of concurrent manometry and videofluoroscopy of the esophagus and pharynx. Responsibilities also include implanting markers into the esophagus and pharynx of experimental animals, executing in vivo organ bath studies of the esophagus, and data analysis for data from all studies.

Requirements: M.S. in biochemistry (specialization in gastroenterology); 3 years research experience including studies of motor function of gastrointestinal tract; in vivo and in vitro studies of motor function in pharynx; muscle strip and organ bath studies; and synchronized video-manometry. Experience may have been gained pursuing postgraduate studies and research.

Hours: 8 a.m. to 5 p.m. Salary: $27,000. Send résumé to: Bernadette Kimbrough Milwaukee Downtown Job Service 819 North 6th Street Milwaukee, WI 53202 Equal Opportunity/Affirmative Action Employer, M/F/H.

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To be successful, you’ll need a B.S., M.S. or equivalent in Life Sciences or Medical Technology, with a Ph.D. preferred for senior positions, and 3+ years of Clinical ELISA or Immunoassay, Clinical Controls or Clinical Chromatography development experience.

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You’ll head-up the Bioassays Group and play a leading role in our Drug Design, Dermal Wound and Immune Modulation projects. To be successful, you’ll need a Ph.D. in Cell Biology or Immunology with 3-5 years experience or an M.S. with 5-8 years industrial experience. You must also have hands-on experience with mammalian cell culture bioassays, including chemotaxis assays, ELISA immunoassays and assays for matrix protein synthesis.

Pharmacologist
You will develop new pharmacological assays and interface with a staff of life scientists performing pre-clinical animal studies. Requirements include a Ph.D. in Pharmacology, Pharmacy, or related field with two or more years experience, including the isolation and quantification of cytokines or other proteins from tissue, plasma, and serum samples.

Postdoctoral Scientist
As a postdoctoral scientist in Molecular Biology, your primary responsibilities will include expression and evaluation of novel, mutated or modified forms of cytokines. In addition to a Ph.D. in Molecular Biology or related field, you should have experience in DNA cloning, sequencing, site-directed mutagenesis and/or transfection of mammalian cells.

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CHROMOSOME STRUCTURE AND DYNAMICS

This 1991 CAROLINA CONFERENCE will be held May 2 through 4 at the Kenan Center on the campus of The University of North Carolina at Chapel Hill.

Sessions and Participants:
I. Kinetochores, Centromeres, & Segregation
(Salmon, Brinkley, Rieder, and Michelson)
II. Chromosome Dynamics in the Cell Cycle
(Cleveland, Gerace, Agard, Earnshaw)
III. Chromosome Organization
(Zakian, Broach, Pardue)
Poster Session
IV. Chromosome Maintenance: Repair, Replication, Recombination
(Reissnick, Petr, Hanawalt, Fangman, Pulkki)
V. Chromosome and Sequence Evolution
(Edgell, Radman, Langley, Charlesworth)
VI. Chromosome Transfer and Artificial Chromosomes
(Bloom, Ruddle, Fantas, Moyzis, Heitter)

The total cost of registration and meals is $250 (does not include lodging). Apply by March 1 by writing a brief letter describing your research interests and their relevance to this meeting. The number of participants is limited. For further information contact Jo Ann McPherson, The Program in Molecular Biology & Biotechnology, CB# 7100-S, 130 MBBII, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7100.

Co-sponsored by the North Carolina Biotechnology Center, National Institute of Environmental Health Sciences, and the Environmental Protection Agency, Research Triangle Park, NC.

POSITIONS OPEN

CYTOGENETICS. The Department of Pathology at Beth Israel Hospital, a major teaching affiliate of Harvard Medical School, seeks an M.D. or Ph.D. with experience in cytogentetics. Our new service, planned in conjunction with the Department of Obstetrics and Gynecology, will encompass amniotic fluid, chorionic villus, blood, bone marrow, and solid tumor cytogentetics. Opportunities include clinical consultations, introduction of new technologies, collaboration with other diagnostic areas, and participation in basic research. Send curriculum vitae and names of three references to: Michael Mitchell, M.D., Beth Israel Hospital, Department of Pathology, 330 Brookline Avenue, Boston, MA 02215. An Equal Opportunity Action Employer.

RESEARCH ASSOCIATE I. For design, fundamental research, and publication in the area of chemical sensor devices, including characterization and modification of microporous materials in thin films, and application for chemical flow apparatus and computer modeling of adsorption and gas diffusion in porous materials. M.S. in inorganic chemistry in area of tailored sorption in microporous materials. Forty hours per week; $20,000 per year. Send résumé to: New Mexico Department of Labor, Cost Center 1001, 501 Mountain, N.E., Albuquerque, NM 87102, Job Order Number 33499.

RESEARCH ASSISTANT, PHARMACOLOGY. B.S. in pharmacy and 5 years of related experience in pharmacological research. Conduct pharmacological experiments with minimal supervision including maintenance of primary cultures of neuronal and continuously growing tumor cells. Responsible for the radioimmunoassay of cyclic AMP and isolation of radioactive cyclic AMP from cell cultures. Design and interpret dose response experiments accurately without supervision. Calculation of results with BASIC programs and graphical presentation of data for both internal and external evaluation in scientific journals. Extract and evaluate information from the scientific literature. Forty hours per week. Salary: $23,000 per year. Application by résumé to: Colorado Department of Labor and Employment, 600 Grant Street, #900, Denver, CO 80205-3528. Refer to Order No. CD195335.

RESEARCH ASSISTANT. For northeastern Ohio educational institution to characterize regulation of guanylate cyclase by atrial natriuretic peptide and purify proteins; prepare toxic chemical and radioactive samples; perform radioimmunoassay; run gel electrophoresis; in-vitro antibodies, nucleotides; develop autoradiogram; perform surgery on animals; enzyme assay; utilize histological techniques, spectrophotometer technique, biomembrane preparation technique, and HPLC (high-performance liquid chromatography) technique. No experience required in above duties but applicants will qualify with 6 months experience as a graduate research assistant. Experience must be in preparing red blood cell membrane for use in testing enzyme activity; perform surgery on animals; assay activity of Na+ K+ ATPase enzyme using spectrophotometer; use electromicroscope and histological technique to determine membrane quality, perform radioisotope labeling technique, and an M.S. in biology or biochemistry (must have taken one course each in histology technique, electromicroscope technique, DNA recombination, tissue culture, biochemistry, radiotopes, human physiology, and advanced cardiovascular physiology). Must be willing to work with radiotopic material and highly toxic chemicals. Monday to Friday, 9 a.m. to 5 p.m. Salary: $18,677 per year. Must have proof of legal authority to work permanently in the United States. Send résumé with duplicate (no calls) to: J. Davies, JO#1255650, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

EMPLOYMENT AGENCIES

1991 THESE ARE THE NEEDS OF OUR CLIENTS

PHARMACUTICS: Section Head Clinical/Pre-Clinical Pharmacokinetics in wild scientific areas. There are multiple openings available across the country. Salary: $50,000 to $85,000 plus bonus.

METABOLISM: B.S./Ph.D. in Biochemical Chemistry Manager and Senior Scientist positions. Should have experience interacting with clinical researchers. Strong qualitative/quantitative separation of drugs and metabolites in bio-fluids. Salary: $45,000 to $65,000 plus.

FORMULATION SCIENTIST: B.S./Ph.D., level positions in the sterile area. Small or large volume parenterals and liquid dosage forms. There are multiple openings. Salary: $45,000 to $65,000 plus.

Call or send your résumé to:

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Tourette Syndrome Association, Inc.

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SCIENCE, VOL. 251
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With SMART System, we’ve learned to expect a maximum return on injection, e.g. 78% of ovalbumin at 1 ng. We have evidence of efficient sample concentration and trace enrichment, e.g. 50 ml to 50 µl in a single step. And we’ve exchanged buffers rapidly with better than 95% recovery.

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Our definition of success in micropurification has changed since we have gotten SMART System.

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SMART System, when you need to do a lot with a little.
Now ultra-sensitive detection of Western Blots takes less than a minute.

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A revolutionary new detection method without radioactivity.

It's a breakthrough! With new Enzygraphic Web, you just process your Western in the usual manner using peroxidase linked antibody as your secondary probe to localize your target protein.

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The target band rapidly appears on the web by electron transfer via peroxidase linked probe to the unique web detection system. Result: you get ultra-sensitive detection of Westerns in less than a minute without radioactive probes.

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- More sensitive than existing colorimetric methods using peroxidase or alkaline phosphatase linked probes.

**Ultra-Fast:**
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Detection by Enzygraphic Web of fusion protein expressed by the IBI FLAG™ vector.