

### Sequence Processing Software

GeneJockey is a program for editing, manipulating, and analyzing nucleic acid and protein sequences on the Apple Macintosh. The program can generate optimized polymerase chain reaction (PCR) primers. It can rapidly scan nucleic acid sequences to select all possible pairs of oligonucleotides suitable for use as primers to direct efficient DNA amplification by PCR. Sequences can be easily imported from or exported to other programs. Restriction analysis can be performed. Recognition sequences are given for more than 400 restriction enzymes and more can be added. Built-in communications routines enable on-line access to databases. A comprehensive tutorial module makes the program rapidly accessible to the new user. Biosoft. Circle 521.

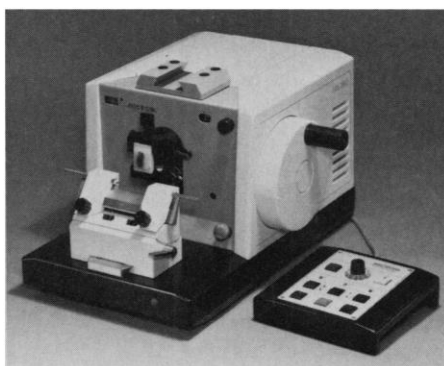
### Thermostable DNA Polymerase

A new thermostable DNA polymerase, isolated from the bacterium *Thermus thermophilus*, is active at elevated temperatures (optimum 75°C). The enzyme lacks 5' → 3' and 3' → 5' exonuclease activity, which means there is no degradation of the final DNA product and sequencing autoradiograms result in very clear bands. Sequencing autoradiograms are comparable to those obtained with T7 polymerase but with the advantage that most secondary-structure artifacts are resolved due to the elevated extension temperature. Hybaid. Circle 522.

### Microtome Line

A new line of MICROM precision microtomes has an improved ergonomic design. The MICROM line of rotary microtomes includes models for every type of routine paraffin histology, advanced plastics histology, and industrial microtomy. All achieve high precision and stability with backlash-

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



free and maintenance-free roller-bearing guideways. Specimen slices from 0.5 μm to 60 μm can be achieved. Most instruments feature specimen retraction during the return stroke to prolong the life of the knife edge and maximize reproducibility. Carl Zeiss. Circle 523.

### Conversion Software

Unitran is a unit conversion facility that includes more than 400 predefined units and physical constants in 75 categories (for example, acceleration and kinematic viscosity). The user can customize Unitran with additional entries. Entire tables of data can be imported and converted. Formulas can be generated with parameters in inconsistent units, and Unitran will calculate the results in SI. The program is PC/PS-2 DOS-compatible and requires 640K random access memory and a hard disk. Intellibase Engineering Software. Circle 524.

### Molecular Graphics Software

An IBM-compatible version of NEMESIS, a molecular graphics computer program, is now available. A version for the Apple Macintosh was introduced last year. Oxford Molecular. Circle 525.

### Gel Electrophoresis Documentation System

Gel Print is a video printing system for recording electrophoretic patterns with high spatial resolution and sensitivity, eliminating photographic materials and processing. Features include a thermoelectrically cooled charge-coupled device camera and variable exposure that enable the recording of fluorescent or visibly stained gels and autoradiograms. High-quality images can be printed as a positive or a negative, with display time, date, exposure, and a unique sample

identification number for easy reference. Optional features allow images to be transferred to a personal computer for archiving and analysis. BioPhotonics Corp. Circle 526.

### Columns for Capillary Electrophoresis

Three new capillary electrophoresis columns with novel, bounded phases are available. The CElect columns offer a stable interior surface that is superior to bare silica tubing for many protein and polymer separations. The three phases—a moderately hydrophobic phase, a highly hydrophobic phase, and a hydrophilic phase—alter electroosmotic flow in the columns in unique ways that affect the separation mechanisms. The manufacturer also recommends the hydrophobic columns for increased selectivity in micellar separation experiments. Supelco. Circle 527.

### Literature

*Embedding Kits Data Sheet* lists more than 25 embedding media for both light and electron microscopy as well as molds, trays, and mounting media. Polysciences. Circle 528.

*Data Acquisition Software* brochure includes information on packages that allow the interfacing of a variety of RS232 instruments to computers. Labtronics. Circle 529.

*Purifier Class II Safety Cabinets and Clean Benches* is a 40-page color catalog with not only information on products but also definitions, answers to common questions, a selection guide, and a bibliography. Labconco Corp. Circle 530.

*Technical Software Product Reports* is a series that provides up-to-date information on programs from personal computers in more than 85 different product categories. Information Age Publishing. Circle 531.

*Preparing Samples by Supercritical Fluid Extraction* is a 27-page primer that provides an easy-to-understand discussion of this sample preparation technique. The technique allows analytes of interest to be removed from complex solid samples using a supercritical fluid, such as supercritical carbon dioxide. It provides a safe, efficient, and cost-effective alternative to manual techniques. Hewlett-Packard. Circle 532.

*Enzymes and Research Biochemicals* is a 1991-92 catalog of enzymes for use in clinical diagnostics, immunodiagnostics, and biotechnology. New products include ascorbate oxidase. Biozyme Laboratories. 533.

# Personnel Placement

## LINE CLASSIFIED ADVERTISEMENTS

**DEADLINES:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* publishes each Friday, except the last Friday of the year. Advertisements must be submitted in writing.

**HOW TO SUBMIT A CLASSIFIED AD:** Prepare double-spaced typewritten ad copy on a separate sheet. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Also include a cover sheet which gives name and phone number of contact person, desired date of publication, and billing information, including any special invoicing requests. Mail or FAX materials to:

**SCIENCE Classified Advertising**  
1333 H Street, N.W., Room 940  
Washington, DC 20005  
Telephone: 202-326-6555  
FAX: 202-682-0816

**CLASSIFICATIONS:** *Science* publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired.

**HOW TO CALCULATE RATE FOR CLASSIFIED AD:** Ads are \$41 per line with a \$410 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces.

To ESTIMATE ad cost, count total number of 52 character lines and multiply by \$41 to find approximate cost of ad per week. Each line of centered heading counts as one line. Also count one line for white space between headline and first line of text; all partial lines are also counted as full lines (including all centered reply information).

Remember, this is a rough estimate only. Allow for variation between estimated typewritten lines and ads when actually typeset for magazine. Therefore, purchase orders must allow additional funds for flexibility and/or adjustment. *Science* cannot provide proofs of typeset ads.

**PREPAYMENT DISCOUNT:** A 3% cash discount is granted to all prepaid line ads. Prepayment made in U.S. dollars by checks drawn on U.S. banks is required on all foreign ads.

**CREDIT CARDS:** *Science* accepts MasterCard and VISA. Both personal and corporate cards may be used. Prepayment does not apply to credit cards.

**BOXES AND LOGOS:** Any line classified ad can be boxed and/or published with logo to increase its visibility on page. Since the box takes up additional space, one line now equals 48 characters and spaces: two additional lines will be added to allow for top and bottom rules. Logos are billed according to the number of lines needed to fit logo in space.

**CANCELLATIONS:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

## DISPLAY PERSONNEL ADVERTISEMENTS

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

**Scherago Associates**  
1515 Broadway  
New York, NY 10036  
Telephone: 212-730-1050  
FAX: 212-382-3725

**CONDITIONS:** Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it and to decline classifications which it considers misleading.

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Parasitologist/microscopist to join group studying the fine structure and immunocytochemistry of malarial parasites starting from 1 July 1991. Experience with light and immunoelectron microscopy and immunocytochemistry preferred. Send letter of application, résumé, and three letters of recommendation to: Masamichi Aikawa, M.D., Institute of Pathology, Case Western Reserve University (CWRU), Cleveland, OH 44106. CWRU is an Affirmative Action/Equal Opportunity Employer.

**ASSISTANT PROFESSOR.** Position available in molecular neurobiology in neurodegenerative diseases, including Alzheimer's disease, in established multidisciplinary laboratory. Qualifications include a Ph.D. or M.D. and a strong background in biochemistry and molecular biology to explore the molecular basis of these diseases. Submit curriculum vitae and three references to: Dr. Carol A. Miller, Department of Pathology, University of Southern California Medical School, 2011 Zonal Avenue, Los Angeles, CA 90033.

**BIOLOGICAL SCIENCE.** Botanist, **ASSISTANT PROFESSOR**, tenure-track position beginning January 1992. Teaching duties include: marine botany, terrestrial plants, introductory biology, and/or a nonmajors course. Ph.D. required, commitment to excellence in undergraduate teaching is essential. Candidate is expected to work with students on undergraduate research projects. Send curriculum vitae, transcripts, up to three recent reprints, and three letters of recommendation by 31 August 1991 to: Dr. Richard Gude, Chair, Department of Biology, Box 98F, The University of Tampa, 401 West Kennedy Boulevard, Tampa, FL 33606-1490. Equal Opportunity/Affirmative Action Employer.

## RESEARCH ASSISTANT PROFESSOR DEPARTMENT OF PHARMACOLOGY

Position available to conduct research on mechanisms of drug hepatotoxicity at both clinical and experimental levels, as well as other aspects of drug metabolism. Candidate should have a Ph.D. in pharmacology, biochemistry, or molecular biology, and should have conducted research on drug hepatotoxicity or cytochrome P450 system. Salary is competitive and fringe benefits are excellent. Send curriculum vitae and references to: Dr. Martin Black, Chief, Liver Unit, Division of Clinical Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. Equal Opportunity Employer.

## HARVARD UNIVERSITY DEPARTMENT OF CHEMISTRY ASSISTANT PROFESSOR OF THEORETICAL CHEMISTRY

Applications are invited for an assistant professorship in any area of theoretical chemistry. Applicants should arrange to have three letters of recommendation sent independently and should provide curriculum vitae and brief descriptions of future research plans. Harvard University is an Affirmative Action/Equal Opportunity Employer. Applications from women and minority group members are welcome. Applications and supporting material should be sent no later than 30 June 1991 to: Professor Martin Karplus, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138.

## NEUROPHYSIOLOGY ALBERT EINSTEIN COLLEGE OF MEDICINE

The Department of Ophthalmology and Visual Sciences has an opening for an **ASSISTANT PROFESSOR** (tenure track) in experimental neurophysiology. Qualifications include a doctoral degree, postdoctoral experience, and a commitment to both teaching and basic research. Research space is available near the Department of Neurobiology to enable collaborative interactions. Major preference will be given to a cellular neurophysiologist with research interest in synaptic physiology and experience with modern electrophysiological techniques, with some preference to interest in the vertebrate retina. Candidates should submit curriculum vitae including a short description of proposed research interests, and the names of at least three references by 15 August 1991 to either Dr. R. M. Burde, Professor and Chairman, or Dr. J. E. Brown, Professor, Department of Ophthalmology and Visual Sciences, Albert Einstein College of Medicine, 111 East 210th Street, Bronx, NY 10467-2490.

## POSITIONS OPEN

**NEUROANATOMIST.** The Department of Anatomy, Chicago College of Osteopathic Medicine, invites applications for a tenure-track position at the rank of **ASSISTANT PROFESSOR**. Applicants must have a Ph.D. or equivalent, and a minimum of 2 years of postdoctoral experience. Teaching responsibility is primarily in neuroanatomy, but participation in gross anatomy and histology is also required. It is expected that the successful candidate will develop an independent research program capable of attracting extramural funding. Interested applicants should send their curriculum vitae, a statement of research interests, and the names of three references to: H. Daniel Bodley, Ph.D., Chairman, Department of Anatomy, Chicago College of Osteopathic Medicine, Downers Grove, IL 60515. Affirmative Action/Equal Opportunity Employer.

**ASSISTANT/ASSOCIATE PROFESSORS.** Lehigh University invites applications for two tenure-track faculty positions in the Department of Molecular Biology in areas related to genetics, development, immunology, or biotechnology. Start-up funds, NIH predoctoral training grant, and affiliation with Lehigh's Center for Molecular Bioscience and Biotechnology are available. Send curriculum vitae, statement of research and teaching interests, and names of three references preferably by 30 June 1991 to: Jeffrey A. Sands, Chair, Department of Molecular Biology, Mountaintop Campus Building A, Lehigh University, Bethlehem, PA 18015. Lehigh is an Equal Opportunity/Affirmative Action Employer.

## ASSISTANT OR ASSOCIATE PROFESSOR BIOCHEMISTRY/CELL BIOLOGY

The Department of Biochemistry at the University of Mississippi Medical Center invites applications for a tenure-track position from individuals who have backgrounds in cellular biochemistry. The department is well equipped and has strong research programs in eukaryotic gene organization and expression, protein synthesis, ribosome biogenesis, nucleic acid biophysics, enzymology, and protein chemistry. The successful applicant is expected to establish or have an independent, high quality funded research program, to participate in the training of medical, dental, and graduate students and to teach a graduate level course in cell biology. Send curriculum vitae, an outline of future research plans, and the names of three references to: Dr. Mark Olson, Chair, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.

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

## ASSISTANT/ASSOCIATE PROFESSOR OF ENVIRONMENTAL MICROBIOLOGY

The Department of Environmental Health of the Harvard School of Public Health is seeking applicants for a position in environmental microbiology. The department plans to expand its curriculum and research in this area and is emphasizing the study of air and water-borne exposures to microorganisms and the ways microbes transform organic and inorganic chemicals. Applicants must have an established research career and a doctorate in environmental microbiology or related areas such as bacteriology, mycology, or environmental health. They must have experience in teaching and advising doctoral students. Harvard University is an Affirmative Action Employer. The school is especially interested in applications from qualified women and minorities. Applicants should send a letter of interest and a résumé to:

Chair  
Search Committee, Environmental Microbiology  
Department of Environmental Health  
Harvard School of Public Health  
665 Huntington Avenue, Room 1305  
Boston, MA 02115

**DON'T FORGET**  
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# SCIENCE

## POSITIONS OPEN

### ASSISTANT PROFESSOR RESEARCH NEUROLOGY

Cellular immunologist with interest in pathogenesis of viral infections of CNS. Funding available to direct established project in NINDS Program grant on immune aspects of viral-induced demyelination. Part of a molecular-oriented multidisciplinary group of investigators. Opportunities to develop own research interests as well. Application, including curriculum vitae, list of publications, and the names of two referees, should be sent to: **Leslie P. Weiner, M.D., University of Southern California (USC) School of Medicine, 2025 Zonal Avenue, MCH 142, Los Angeles, CA 90033.**

*USC is an Affirmative Action/Equal Opportunity Employer, M/F/H, and we encourage applications from minorities.*

### DIRECTOR, GLOBAL CHANGE AND ENVIRONMENTAL QUALITY PROGRAM

The University of Colorado at Boulder seeks a distinguished leader for its global change and environmental quality program. This individual will create an interdisciplinary program to foster and integrate contributions from the physical, biological, engineering, and social sciences to the study of global change and environmental quality. The university will be creating a cross-disciplinary program focusing on such problems as global climate change, local and regional environmental quality, and sustainable development. The successful candidate will be tenured in an appropriate department, but also should have a demonstrated commitment to, and skill in, working across disciplines. The director will be expected to provide intellectual leadership and to make primary contributions to the formulation of new research and teaching programs related to global change and to environmental quality, and to maintain a personal research program. Familiarity with government research and environmental policy and knowledge of funding sources will be important, as will be an ability to identify the intellectual and policy issues emerging from concern over global change and environmental sustainability. The director will report to the vice chancellor for academic affairs. Application letter, résumé, and names of four references should be sent to: **William Lewis, Chair, Global Change Search Committee, Campus Box 334, University of Colorado, Boulder, CO 80309.** Applications can be made at any time until the position is filled, but the committee will begin screening applications as of 1 July 1991 and may fill the position at any time after that date.

*The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.*

### DEVELOPMENTAL BIOLOGIST/ TOXICOLOGIST

The Perinatal Toxicology Branch, Developmental Toxicology Division, Health Effects Research Laboratory, U.S. Environmental Protection Agency (EPA), has openings for two permanent full-time **PRINCIPAL INVESTIGATORS** at the GS-12/13 level (salary range: \$37,294 to \$57,650). Research emphasis is on cellular, biochemical, molecular, or physiological pharmacokinetic approaches to elucidating mechanisms of normal and abnormal morphological/functional development. Experience in mammalian developmental biology/toxicology preferred; interest in applying results of basic research to problems of risk assessment is essential. Adequate space, technical support, and start-up funds available. Send curriculum vitae and letter expressing research interests to: **John Rogers, c/o Ramona Litowsky, HRMD (MD-29), U.S. EPA, Research Triangle Park, NC 27711.** Deadline: 5 July 1991.

*An Equal Opportunity Employer.*

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SPECIAL CAREERS SECTION

## POSITIONS OPEN

### CELLULAR/MOLECULAR MECHANISMS OF SENSORY TRANSDUCTION

The Department of Physiology at the University of Utah is seeking candidates for tenure-track faculty positions at the **ASSISTANT OR ASSOCIATE PROFESSOR** level to participate in the department's program on cellular/molecular mechanisms of sensory transduction. Research accomplishments in the study of auditory, gustatory, olfactory, somesthetic, vestibular, visceral, or visual sensory receptors are appropriate. Screening of applicants with Ph.D. or M.D. degree will begin 15 July 1991 and continue until positions are filled. Send letter, curriculum vitae, and names of three references to: **Salvatore J. Fidone, Ph.D., Department of Physiology, University of Utah School of Medicine, 410 Chipeta Way, Salt Lake City, UT 84108.** *Affirmative Action Employer.*

### IMMUNOPHARMACOLOGY/ IMMUNOTHERAPEUTICS

**ASSISTANT/ASSOCIATE/FULL PROFESSOR.** The University of Illinois College of Medicine at Peoria invites applications from individuals with expertise in immunopharmacology. Individuals should have a record of academic achievement. Skills should be in at least two of three areas: (i) basic and/or clinical research, (ii) histocompatibility and immunogenetics with UNOS qualifications, and (iii) clinical immunosuppressive therapy. The immunopharmacologist will complement a growing cadre of biomedical scientists and medical practitioners. The appointment will be full time with the College of Medicine, with a fraction of time allocated to renal and cardiac transplant programs. Clinical responsibilities will include the management of immunosuppressive regimens for adult and pediatric transplant patients and the supervision of immunosuppressive drug trials. Research activities should be focused on the clinical pharmacology of immunosuppression or on the basic mechanisms of immunosuppressive pharmacology, pharmacokinetics, or on molecular processes of immunology. Other requirements: Assistant professor candidates should have a record of productive postdoctoral training and demonstrated promise of developing a strong, independent and fundable research program. Associate professor and professor candidates should be established independent investigators with peer-reviewed grants and research publications as well as experience in teaching and participation in national scientific affairs. Successful candidates will hold a Ph.D. in a relevant biomedical science, an M.D. and/or a Pharm.D. degree (or equivalent doctoral degree). Candidates seeking to fulfill the clinical management immunosuppression requirement will have evidence of appropriate postdoctoral residency or fellowship experience.

Positions are available as early as 1 December 1991; the search will continue until the positions are filled. Salary and rank are commensurate with qualifications. Recently constructed space and start-up funds are available. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of three references to: **Phillip C. Jobe, Chair, Department of Basic Sciences, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, IL 61656.** For information, call 309-672-8525.

**ENDOWED CHAIRS, MOLECULAR AND CELL BIOLOGY.** The Pennsylvania State University. Applications and nominations are invited for individuals to fill two endowed chairs and one endowed professorship in the Department of Molecular and Cell Biology. The Eberly Family Chair, the Willaman Chair, and the Pollard Professorship have been created through the generous gifts of Penn State alumni and friends. Each of these positions will be filled at the rank of **FULL PROFESSOR.** Candidates for these positions are expected to have established exemplary national and international reputations for research and to complement research interests represented in the department including cellular and developmental biology, biomolecular structure/function, and gene regulation. Applications will be reviewed immediately upon receipt. The search will continue until all positions have been filled. Candidates should submit curriculum vitae and names of five references to: **Kenneth A. Johnson, Paul Berg Professor and Chairman of the Search Committee, 108-EP Althouse Laboratory, Pennsylvania State University, University Park, PA 16802.** *An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN



**SENIOR SCIENTISTS.** Triplex Pharmaceuticals, located north of the Texas Medical Center in Houston, Texas, has two senior scientist positions available in the field of triple helix-forming oligonucleotides. The ideal candidate must have a Ph.D. in organic or medicinal chemistry with 3 to 4 years of relevant postdoctoral experience with a demonstrated ability to develop and validate methods for synthesizing novel nucleosides and oligonucleotides. Experience in molecular biology of oligonucleotide analogues is highly desirable. Excellent compensation. For consideration, please send a résumé with publication/patent list before 15 June 1991 to: **Director, Chemistry, Triplex Pharmaceutical Corporation, 9391 Grogans Mill Road, The Woodlands, TX 77380.**

The Tulane University School of Public Health and Tropical Medicine (SPHTM) invites applications and nominations for the **CHAIR** of the Department of Environmental Health Sciences (EHS).

This search takes on special emphasis for Tulane, since environmental studies is a premier focus of the recently adopted University Strategic Plan and because of the major commitment in this research area engendered by the recent establishment of Tulane's university-wide Center for Bioenvironmental Research (CBR). Major federal funding initiating CBR has been allocated to enhancing infrastructure and project-specific research. EHS has been provided with an important share of these new resources. It is expected that the new chairman of EHS will play a major role in the further development of CBR.

The committee and the newly appointed dean of the SPHTM, Harrison C. Spender, M.D., M.P.H., believe that the ideal candidate will have his/her major strength in the life sciences, have recognized achievements in research and teaching, and have demonstrated leadership qualities. Experience in international academic activities and collaboration is desirable.

Candidates should have teaching and research proficiency in one or more of the following fields: toxicology and risk assessment, water quality management, hazardous and toxic waste management, international environmental health, occupational health, and industrial hygiene.

Applications will be accepted until a suitable candidate is identified. *Applications from women and persons from minority groups are particularly encouraged.*

Applicants should forward curriculum vitae, the names and addresses of three references, and a statement of professional goals, interests, and experience to:

**Hans Weill, M.D.  
Chair, EHS Search Committee  
Office of the Dean  
Tulane University SPHTM  
1430 Tulane Avenue  
New Orleans, LA 70112**

### ASSISTANT DIRECTOR SCIENCE EDUCATION CENTER

Ph.D. preferred in the natural sciences (physical sciences preferred) with either advanced degree in education or extensive experience in teaching K-12 students and/or teachers; or Ph.D. in Science Education with at least one degree in a natural science, mathematics or engineering. Experience in educational software helpful. The successful candidate will help develop/teach programs for K-12 students and teachers. It is anticipated that the successful candidate will hold a joint appointment with an appropriate department of the University. Start date: 16 August 1991. Salary: \$27,000 to \$32,000 for 10.5-month appointment. Send letter of intent, curriculum vitae, and three letters of reference to: **Jeffrey M. Priest, Director, Ruth Patrick Science Education Center, Box 3, University of South Carolina at Aiken (USCA), 171 University Parkway, Aiken, SC 29801.** Telephone: 803-648-6851. Application deadline: 15 June 1991. *USCA is an Affirmative Action/Equal Opportunity Employer.*

PENNSSTATE



University Park  
Campus

## SENIOR VICE PRESIDENT FOR RESEARCH AND DEAN OF THE GRADUATE SCHOOL

The Pennsylvania State University invites applications and nominations for the position of Senior Vice President for Research and Dean of the Graduate School. The Senior Vice President for Research and Dean of the Graduate School reports to the Office of the President and will work with the Executive Vice President and Provost of the University and the faculty to establish and administer policy on research and graduate study. As a senior academic officer, the Senior Vice President will participate in the formulation of academic and fiscal policy for the University and will represent the University's research and graduate study interests to federal and state governments, to the international community, and to industry.

Penn State is one University geographically distributed at 23 campus locations. Penn State is a premier research institution, ranked 11th nationally in total research and development expenditures and 2nd nationally in private industry sponsored research support. Although a major portion of the research activities takes place at University Park, elements of the research program exist at all locations.

Programs of graduate study are offered at University Park, The Milton S. Hershey Medical Center, Erie Behrend College, Harrisburg Capital College, and Great Valley. Graduate study is offered in about 140 major programs, with 19 advanced academic and professional degrees being conferred. During the academic year 1989-90, approximately 1,840 advanced degrees were conferred, of which 429 were doctorates. Approximately 10,300 graduate students were enrolled in Fall 1990.

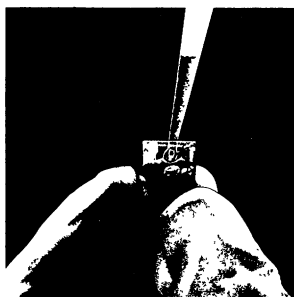
Candidates for this position should have academic credentials appropriate for appointment as a tenured professor with an accomplished record of research; a broad understanding of academic institution; executive experience and proven leadership capacity; understanding and support for the University's multiple missions and its commitment to cultural diversity; commitment to the fostering of interdisciplinary research; evidence of experience in fiscal management; and the ability to attract human and financial resources to the University.

The Search Committee will review applications and nominations beginning June 24, and will continue to receive them until a candidate is selected. Nominations and applications, accompanied by a resume or equivalent information, and the names, addresses and phone numbers of four references, should be mailed to:

Dr. Eva Pell, Chair, Search Committee  
Senior Vice President and Dean of the Graduate School  
201 Old Main, Dept. SCI • University Park, PA 16802

An Affirmative Action/Equal Opportunity Employer  
Women and Minorities Encouraged to Apply

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Working in small teams, you'll be involved in ongoing drug studies. Current areas of interest include anesthesiology, gastroenterology, psychotherapy, mycology, parasitology, cardiology, oncology, allergy and immunology. And **Medical Writers, Biostatisticians**, and professionals in **Regulatory Affairs** and **Professional Services** will find exciting opportunities at

the Janssen Research Foundation as well.

For the clinical professional, few organizations can match the advantages at the Janssen Research Foundation. Research and development is the mainstay of all we do, and as a member of the Johnson & Johnson Family of Companies, we offer a progressive environment, opportunities for advancement, competitive salary and superlative benefits, including our on-site wellness center.

We are planning to move to our state-of-the-art facilities currently under construction in scenic Washington Crossing, NJ in early 1992. If you'd like to bring your innovative ideas to an organization that will appreciate them, send your resume with salary history in confidence to: the Janssen Research Foundation, Employment Office Box S591, 40 Kingsbridge Road, Piscataway, NJ 08855-3998. An Equal Opportunity/Affirmative Action Employer M/F/H/V.

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# BIOTECH UPDATE

## Genetically engineered crop protection brings a new dimension to agriculture.

At the Agricultural Research Division of American Cyanamid we've developed a significant in-house biotechnology capability. Our work has fostered major advances in the development of imidazolinone-resistant corn and in the near future we expect to introduce the first world crop with herbicide resistance. At our 640-acre campus-like setting, you'll discover state-of-the-art research laboratories and an interdisciplinary work environment where innovative thinking is nurtured. Right now we have immediate opportunities for:

### Plant Breeder/Geneticist

We are seeking a PhD level scientist to join our Cell Biology and Genetics Group as part of our Plant Biotechnology effort. This individual will design, implement and direct a program using plant breeding, genetic, and physiological techniques to characterize genetically engineered crop plants. Training in plant breeding and genetics is required and experience in plant physiology, agronomic crops, and weed science is desirable. Dept. WS1

### Cell Biologist

The BS/MS level scientist we seek for our Cell Biology and Genetics Group will conduct research in the area of plant transformation. This position will involve using cell biology, biochemistry, and plant transformation techniques in the development of novel transformation technologies and their application to agronomically important monocots. Training in plant tissue culture and experience in plant transformation are required. Experience in monocot cell culture is desirable. Dept. WS2

### Molecular Plant Pathologist

We are seeking an individual with a BS/MS in the biological sciences for an exciting program in molecular plant pathology that has recently been initiated in our Plant Biotechnology section. Genetic, molecular and cytological techniques will be applied to a fungal phytopathogen to elucidate the specific developmental processes involved in the infection by that pathogen of a plant host. Training and experience in microbial (preferably fungal) genetics, molecular biology, and biochemistry are desirable. Dept. EF1

In addition to our unique interdisciplinary environment and history of new product innovations, American Cyanamid Company offers a competitive salary and excellent benefits, including a 401K Savings Plan. We invite you to forward your resume and salary history to: Employment Office, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. Please be sure to indicate the appropriate department code. An Equal Opportunity Employer M/F/H/V.



## POSITIONS OPEN

**BIOTECHNOLOGY DIVISION CHIEF.** Responsibilities for planning, organizing, and managing research and development programs for biotechnology derived materials and processes. Provides leadership to a multidisciplinary research team and to interaction with academia, industry, and other government agencies. Ph.D. in biological/physical sciences and experience in research and administration of a scientific team required. Salary range is \$61,643 to \$71,916 depending upon qualifications and experience. For consideration send curriculum vitae and references to: **U.S. Army Natick Research, Development and Engineering Center, Attention: STRNC-YMT (Dr. David L. Kaplan), Natick, MA 01760-5020. U.S. citizenship is required. Equal Opportunity Employer.**

**WILDLIFE BIOLOGY/MANAGEMENT.** Two 1-year temporary positions (one full time and one 0.7 time base) in the Department of Wildlife. Must have expertise in wildlife biology/management adequate to teach specific upper-division courses. Teaching duties may include principles of wildlife management, wildlife techniques, ornithology, case studies in wildlife management, upland habitats, wildlife ecology and management, and case studies in environmental ethics. Expertise must be consistent with teaching assignments as demonstrated by research experience. Send curriculum vitae and three letters of recommendation to: **Dr. Richard I. Ridenhour, Dean, College of Natural Resources, Humboldt State University, Arcata, CA 95521. Telephone: 707-826-3561. Applications must be postmarked by 15 June 1991.**

### FACULTY POSITIONS CLINICAL PHARMACOLOGY

The Division of Clinical Pharmacology at Jefferson Medical College is seeking applicants for two faculty positions at the **ASSISTANT/ASSOCIATE PROFESSOR (M.D.)** and the **ASSISTANT PROFESSOR (M.D. or Ph.D.)** levels. Candidates with research interests in cardiovascular pharmacology, molecular biology, or drug metabolism preferred. Research interests of divisional faculty include nonclinical and clinical pharmacological research. Nonclinical research is in the areas of vascular biology, fibrinolysis, atherogenesis, second messengers, and receptor biology. Divisional facilities include well-equipped laboratories and an eight-bed clinical research unit.

Submit curriculum vitae, summary statement of research interests, and names of three references to: **Dr. Thorir D. Bjornsson, Division of Clinical Pharmacology, Department of Medicine, 1100 Walnut Street, Thomas Jefferson University, Philadelphia, PA 19107-5563.**

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### FACULTY MOLECULAR GENETICS/BIOLOGY

The Department of Biology at New Mexico Institute of Mining and Technology invites applications for a tenure-track position available at the **ASSISTANT PROFESSOR** level.

The primary teaching responsibilities of the successful applicant will be upper division courses in genetics, cell and molecular biology, and a lower division botany course. The applicant will be expected to develop, fund, and maintain an active research program in molecular genetics or any other area of biology provided that modern methods of molecular biology are employed.

The successful applicant will have a Ph.D. in molecular biology, genetics, or related field of biology. Preference will be given to applicants with a background in plant biology and one or more years of postdoctoral training. The candidate must have a demonstrated commitment to research as evidenced by recent publications. Two semesters of college-level teaching experience are preferred. Position is available beginning 1 January 1992. Salary will be commensurate with experience.

Send curriculum vitae, college transcripts, a one-page statement of research and teaching interests, and four letters of reference by 1 August 1991 to: **New Mexico Institute of Mining and Technology, Human Resources, Wells Hall Box C-120, Socorro, NM 87801. Affirmative Action/Equal Opportunity Employer.**

Don't forget to look at other career opportunities in the special "Careers Section" in the center of this issue of *Science*.

## POSITIONS OPEN



City of Hope

BECKMAN RESEARCH INSTITUTE  
OF THE CITY OF HOPE

### FACULTY POSITION EUKARYOTIC GENE REGULATION/ TRANSCRIPTION OR RNA PROCESSING

The Department of Molecular Genetics of the Beckman Research Institute of the City of Hope invites qualified candidates to apply for a tenure-track faculty position at the **ASSISTANT RESEARCH SCIENTIST** level (equivalent to an assistant professor appointment at a university). Candidates should have a Ph.D. degree and at least 2 years of postdoctoral experience. In particular, we are seeking applicants with strong research backgrounds in molecular or classical genetics as applied to eukaryotic transcriptional regulation or RNA processing.

The Beckman Research Institute of the City of Hope is a nonprofit, basic research facility affiliated with the City of Hope National Medical Center. The Department of Molecular Genetics is part of the Division of Biology which is comprised of 15 full-time faculty members. The campus is located in a suburban community in the greater Los Angeles area and has convenient access to major academic and cultural centers of this region.

Interested persons should send a letter of interest and names, addresses, and telephone numbers of three professional references by 19 July 1991 to: **Beckman Research Institute of the City of Hope, W. J. Mutter, Department of Molecular Genetics, 1450 East Duarte Road, Duarte, CA 91010.**

### FACULTY POSITION OREGON HEALTH SCIENCES UNIVERSITY

Applications are invited for a tenure-track faculty position in the Department of Molecular and Medical Genetics. Appointment at either the **ASSISTANT OR ASSOCIATE PROFESSOR** level will be considered. Applicants must have a Ph.D. or M.D. degree, at least 2 years of appropriate postdoctoral training, and show evidence of a firm commitment to an independent research career. Applicants for appointment at the associate professor level should have a documented record of research productivity and demonstrated ability to successfully obtain research funding from extramural sources. While applications from individuals working in any area of molecular genetics will be accepted, those with experience in mammalian gene transfer systems and/or interest in the genetic control of development are especially encouraged to apply. Responsibilities will also include participation in the School of Medicine curriculum and in departmental and interdepartmental graduate training programs. Interested applicants should send curriculum vitae, appropriate reprints, a brief description of future research plans, and a list of at least four references by 1 July 1991 to:

**Dr. Michael Forte**

Chairperson, Search Committee  
Vollum Institute, L-474

Oregon Health Sciences University  
3181 S.W. Sam Jackson Park Road  
Portland, OR 97201

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### VISITING FACULTY POSITION

The Faculty of Biological Science at The University of Tulsa has an opening for a **VISITING ASSISTANT PROFESSOR** to teach introductory courses in the areas of general biology, cellular biology, and genetics for both majors and nonmajors. The salary is competitive and the 1-year appointments begin 26 August 1991. The department has a faculty of 16 and offers B.S., M.S., and Ph.D. degrees.

The University of Tulsa is a private, comprehensive university with a strong commitment to teaching and research. Applicants should have a Ph.D. degree and teaching experience. Send curriculum vitae and three letters of reference to: **Dr. Richard L. Reeder, Faculty of Biological Science, The University of Tulsa, 600 South College Avenue, Tulsa, OK 74104.**

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# Make A Difference In The Quality of Life

The Hyland Division of Baxter Healthcare, a leader in the area of human plasma-derived protein therapeutics, is undertaking the development of its next generation of therapeutics with the aid of state-of-the-art biotechnology. We seek an energetic individual who can contribute effectively in a multi-disciplinary R&D environment in the following areas:

## SUPERVISOR, PROTEIN PURIFICATION (Dept. LD/SPP)

We seek an individual to lead/coordinate new product/new purification technology research projects, including timeline, staffing, training and budget. A PhD in biochemistry is required, plus at least 3 years multiple project management experience. A strong background in protein purification, including knowledge of technology, characterization and function of proteins is essential. In addition, applicants must have experience in both research phase and development scale of purification process, and be familiar with regulatory aspects of process development. Knowledge of cell culture and recombinant technology essential.

## CELL CULTURE PROCESS DEVELOPMENT (Dept. BF/CC)

The selected candidate will be responsible for maintaining mammalian cell cultures and adapting them to serum-reduced and/or defined media; selecting and optimizing process conditions for maximizing product; and the operation of small and large bioreactors for cell culture supernatant production, as needed. You will analyze experimental data and prepare reports. You will also assist other personnel in the scale-up of the cell culture process. A BS in biology or biochemical engineering is required; an MS degree in mammalian cell biology or biochemical engineering is preferred. 3-5 years of work experience in a cell culture or fermentation laboratory or pilot plant is essential.

Baxter Healthcare Corporation, a Fortune 500 company, is synonymous with products, systems and services devoted to improving health care throughout the world. We provide a smoke-free environment, competitive compensation and benefits. Please send your resume in confidence (indicating on the outer envelope the Dept. Code for your position of interest) to: **Baxter Hyland Division, Human Resources Dept., 4501 W. Colorado Blvd., Los Angeles, CA 90039.** An Affirmative Action/Equal Opportunity Employer.

Hyland Division

**Baxter**





## UCLA Department of Physiology Faculty Position

### Regulatory and Integrative Physiology

We wish to appoint someone studying how cellular or molecular processes are governed by functional needs, such as those of the whole animal. We are not particularly concerned with what particular system the candidate studies. Instead, we seek someone with broad interests and perspective, demonstrated capacity to connect different levels of organization, and the ability to interact with physiologists studying various systems and organizational levels. The candidate may be either (1) a cell/molecular biologist accustomed to relating findings to higher level constraints, or (2) an organ, system or whole-animal biologist accustomed to relating findings to cell/molecular mechanisms. In addition, the appointee will be expected to participate actively in the teaching mission of the department.

The search is without regard to level of appointment: established senior as well as junior candidates will be considered. Candidates should send a curriculum vitae, statement of interests, and 2-3 representative published papers, and the names of three referees, to:

Regulatory Search Committee  
Department of Physiology  
UCLA School of Medicine  
Los Angeles, CA 90024-1751

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Senatsverwaltung für Wissenschaft und Forschung  
Der Senator als Vorsitzender der Personal-  
kommission der Freien Universität Berlin

**BERLIN**

## DAHLEM KONFERENZEN

We are seeking a successor to the founding Director of the Dahlem Konferenzen, Dr. Silke Bernhard, who has had to resign because of ill health.

The Dahlem Konferenzen, founded in 1974, organize workshops to promote interdisciplinary cooperation between leading scientists from all parts of the world. The workshops, held four times a year in Berlin, focus chiefly on the environmental and biomedical sciences. They provide a limited number of participants with the opportunity for intensive discussion in areas at the forefront of contemporary research. The Dahlem Konferenzen are founded by the Land Berlin, the Stifterverband für die Deutsche Wissenschaft and the Deutsche Forschungsgemeinschaft. Since January 1990 they have been a part of the Freie Universität Berlin.

The Director must be a highly qualified scientist with a Ph.D. or M.D. in natural or biomedical sciences and considerable post-doctoral research experience. He/she must be a proven organizer with the ability to lead and cooperate with a dedicated team. Fluent English and German are essential and experience with organizing scientific meetings and in editing scientific publications would be an advantage.

The salary will be determined according to qualifications under the provisions of the German public service ordinances. Applications, including a CV and publication list, should be sent within four weeks to the Senator für Wissenschaft und Forschung, the chairperson of the Kuratorium of the Freie Universität Berlin, I E, Bredtschneiderstr. 5, W-1000 Berlin 19, quoting reference number 32/91.

## Career Opportunities In Agricultural Biotechnology Ph.D. & M.S. Levels

**DEKALB Plant Genetics**, a leading agricultural seed company, is expanding its plant biotechnology research program in Groton, CT. We seek scientists eager to join our multidisciplinary team engaged in the genetic improvement of maize.

■ **Agronomic Traits** (Ph.D.) You will be responsible for our research program to identify genes for traits of agronomic importance; initial emphasis will concern resistance to insects, such as corn rootworm and European corn borer.

You will interface with genetic transformation and gene expression teams, as well as plant breeders.

An innovative scientist with experience in one or more of the following areas is desired: plant pathology, entomology, biochemistry and molecular biology.

■ **Gene Mapping** (M.S.) You will manage our laboratory research effort in RFLP gene mapping technology. Technical expertise in molecular biology, experience in data handling and analysis, and an aptitude for personnel management are required.

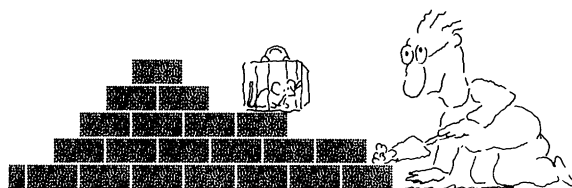
Besides a stimulating scientific environment, we offer excellent salary, benefits, and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resumes to:

Ms. Marie Weston  
DEKALB Plant Genetics  
Eastern Point Road  
Groton, CT 06340



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## CHAIR

### DEPARTMENT OF ANATOMY AND CELL BIOLOGY

The MEDICAL UNIVERSITY OF SOUTH CAROLINA in CHARLESTON has initiated a search for a Chairperson to lead its strong and well-funded Department of Anatomy and Cell Biology. The Department enjoys vigorous research programs in neurobiology, neuroendocrinology, and membrane and developmental biology. It is committed to a broad spectrum of educational responsibilities including undergraduate teaching, predoctoral and postdoctoral training programs, and has distinguished itself with numerous teaching and student research awards. Attractive and extensive laboratory space, intramural and extramural financial support, and new positions are available in an academic environment that provides outstanding opportunities for research initiatives in both the Department and in Interdisciplinary Centers (e.g., the Hollings Oncology Center, the Gazes Cardiac Center, etc.). In addition to the modern facilities within the Department, an expanding campus-wide Institutional Research Resource provides an array of analytical capabilities including quantitative image analysis, electron microscopy, DNA and peptide sequencing and synthesis, NMR, mass spectrometry, and other instrumentation for the conduct of research in molecular and structural biology.

Applications and nominations should include a curriculum vitae, summary of current research activities, a description of teaching and administrative experience, and the names, addresses and telephone numbers of three or more references. Applications will be reviewed until a satisfactory candidate has been chosen. Send replies to: Harry S. Margolius, M.D., Ph.D., Chairman, Anatomy/Cell Biology Search Committee, Room 612 Clinical Sciences Building, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.

*The Medical University of South Carolina is an  
Equal Opportunity/Affirmative Action Employer.*

## DIRECTOR, INTERMEDIATE MANUFACTURING

Centocor, Inc. is a worldwide biopharmaceutical company specializing in monoclonal antibody medicine. Due to our rapid growth and expansion in St. Louis, we have an opening in our intermediate manufacturing department.

This position will involve directing a focused staff of scientists in transferring pharmaceutical production and purification processes from development groups to full scale manufacturing.

The successful candidate will be a Biochemist with a Ph.D. and minimum 8 years process development experience in biotechnology/pharmaceuticals, specifically with large volume isolation and purification of monoclonal antibodies or other proteins for biopharmaceutical applications. A thorough understanding of Good Manufacturing Practices is also required. Experience within the pharmaceutical manufacturing industry in down stream processing of mammalian cell produced therapeutic proteins is strongly desired.

Centocor offers an outstanding compensation and benefits package, plus excellent opportunities for advancement. For immediate consideration, please send your resume to:

Betty Wendland  
Human Resources Manager  
CENTOCOR, INC.  
4649 LeBourget Dr.  
St. Louis, MO 63134



**Centocor**

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## SENIOR SCIENTIST ANALYTICAL CHEMISTRY

**S**andoz Pharmaceuticals Corporation is a leader in the research, development, manufacture, and sale of ethical and over-the-counter pharmaceuticals.

We currently have a position for a Senior Scientist to work with a team involved in the development and application of classical chromatographic techniques (HPLC, GC), coupled with mass detectors, to quantitate drugs and their metabolites in clinical and preclinical specimens.

The selected candidate will supervise and train scientific and technical staff in the operation and maintenance of GC/MS and LC/MS/MS instruments and perform bioanalytical method development, validation and application for IND, NDA and Phase IV projects. In addition, this individual will interpret pharmacokinetic data, generate bioavailability reports for regulatory submission and participate in the design of Drug Metabolism drug development programs.

A Ph.D. in the physical sciences, Chemistry or Biochemistry and 5+ years of experience in quantitative analytical techniques utilizing wet chemistry, LC/MS/MS, GC/MS required. Strong supervisory, verbal and written skills are essential; a background in pharmacokinetics and statistics as well as computer proficiency in data handling for tabular and graphical representations are assets.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey. For prompt, confidential consideration, please respond to position #1662 by forwarding your resume and salary requirements, in confidence, to:

Robert N. Saunders, Ph.D.  
Director, Human Resources 403/1  
**SANDOZ RESEARCH INSTITUTE**  
**SANDOZ PHARMACEUTICALS CORP**  
East Hanover, New Jersey 07936

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## RESEARCH COMPUTING

The ICI Pharmaceuticals Group, ranked among the top pharmaceutical research organizations in the world in terms of sales and R&D investment, is looking for a computing applications specialist to join our R&D Information Systems Department. This individual will be a key member of a team dedicated to finding new ways of supporting a dynamic, international research environment with the systems it needs to effectively compete in the 1990s and beyond.

Within R&D, ICI is rapidly moving from a traditional terminal-based computing environment to an enhanced information environment based on modern workstation platforms. The selected individual will work closely with research scientists to identify, analyze and develop proposals for information systems targeted at facilitating the scientific computing and information needs of research. Emphasis will be placed on participatory prototype development of strategic applications for research within a graphical end-user computing environment.

Position requires a degree in the life sciences (chemistry preferred) or an advanced degree in computer science. Technical expertise in the use of Molecular Design Ltd. software products, MACCS-II, REACCS and/or proven competence in the development of scientific information systems supporting research also required. A research background or familiarity with the drug discovery process is highly desirable.

We offer an excellent salary and flexible benefits program designed to meet the needs of a diverse workforce. Relocation assistance to our corporate headquarters in Wilmington, DE will be provided.

To take advantage of an opportunity to build a career in a dynamic environment, please send c.v. to: **Rose R. Buono, Human Resources, ICI Pharmaceuticals Group, Concord Pike and New Murphy Road, Wilmington, DE 19897.**



**Pharmaceuticals**

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## SENIOR SCIENTISTS

Beckman's Diagnostic Systems Group, located in Southern California, is a world leader in laboratory and hospital instrument systems. Our products play a vital role in improving the quality of life worldwide. You can be a part of our exciting efforts. Consider the following opportunities in Product Development:

### Immunochemistry

You will design and conduct experiments, and may supervise a project team in non-isotopic immunoassay reagent development. You will be responsible for summarizing and interpreting experimental data. Experience in general biochemical techniques, enzyme and antibody purification, solid phase immunoassay, protein immobilization and conjugation desirable. Requires a PhD in Chemistry, Biochemistry, or Immunochemistry and a minimum of 2 years relevant industrial experience or equivalent.

### Clinical Chemistry

You will be involved in the development and performance evaluation of clinical chemistry reagents, calibrators, controls and analytical systems. You will also provide technical assistance and chemistry/system production support to Manufacturing and Quality Assurance. Requires a PhD in Chemistry, Analytical Chemistry, or Biochemistry and a minimum of two years relevant industry experience or equivalent. Computer skills highly desirable.

We offer excellent compensation and benefits packages. Please send your resume, with salary history, to: **Beckman Instruments, Inc., Attn: Professional Staffing MP/SCI, 250 South Kraemer Blvd., Brea, CA 92621.** An affirmative action employer.

**BECKMAN**

Biochemistry

### Opportunities with Monsanto Company

## Bioprocess Technology

Today's Monsanto is a company with an exciting future in high-value, high-performance products. We have the following opportunities available in our Bioprocess Technology Department of Monsanto Corporate Research Laboratories:

### Senior Protein Biochemist

We are seeking a bright, innovative Protein Biochemist who will function as a senior investigator conducting protein purification and biochemical evaluations such as mechanistic studies of inhibition and the nature of protein-protein interactions. Protein recovery will be from recombinant and non-recombinant sources. In many situations, you will benefit from access to hitherto unavailable proteins and enzymes produced by our strong Molecular Biology Groups.

You will also have access to our excellent support staff, instrumentation and facilities. There exist ample opportunities to establish strong scientific credentials through publication and development of novel human therapeutic or agricultural products. You will also be expected to establish new research directions and have excellent interpersonal skills to interface with varied disciplines. You must have a PhD in the area of protein biochemistry and two to four years of postdoctoral or industrial experience.

### Microbial Physiologist/ Biochemist

This is an opportunity for an experienced scientist to define and develop fermentation and biotransformation processes to make bioactive chemicals and proteins. You will effectively use state-of-the-art facilities, any direct subordinates, supporting operations and analytical staff to move projects from concept through laboratory and pilot plant.

Qualifications include three or more years' relevant post-doctoral experience in industrial R&D, supervision of professionals, leadership skills to advance the application of biosynthesis technology to make products of value to Monsanto and you must be a team player.

Please send your résumé with references to Monsanto Company, Mail Zone BB5B, Attn: John Bussen, 700 Chesterfield Village Parkway, St. Louis, MO 63198. We're an equal opportunity employer. M/F/H/V.

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**Monsanto**

**MIT****FACULTY POSITION IN  
RADIOLOGICAL  
SCIENCES**

The Department of Nuclear Engineering at MIT requests applications for a position in the area of radiological sciences. The position will be on a tenure track with an initial three-year appointment. The successful candidate will be a member of the Radiation Science and Technology program of the Nuclear Engineering Department. Candidate should hold a Ph.D. or Sc.D. in an engineering or physical sciences specialty and should have experience in imaging techniques, radiation production and detection, and radiation applications. Candidate should be interested in a broad range of topics dealing with biophysics and imaging.

Independent of the area of research, the candidate should be capable of mounting an extensive research program and obtaining support. The program should interact with and expand other activities in the Nuclear Engineering Department involving nuclear reactions. The candidates should be capable of teaching a wide range of courses in the academic areas of radiation science and technology including radiation and radioisotope applications and experimental nuclear physics. The teaching activities will form an integral part of the radiological sciences program and the successful candidates will have responsibilities for the supervision of student research including master's and doctoral research.

The candidate should also be able to integrate research and teaching with other aspects of the department's radiological sciences program such as radiation dosimetry therapy and health physics. Effective collaboration with other relevant groups in the Boston area is important.

Please submit curriculum vitae to:  
**Professor Gordon L. Brownell,**  
Massachusetts Institute of Technology, Whitaker College of Health Sciences, Technology and Management, Room E25-330B, 77 Massachusetts Ave., Cambridge, MA 02139-4307.

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**Massachusetts  
Institute of Technology**

## Head, Division of Experimental Pathology Department of Pathology

### Memorial Sloan-Kettering Cancer Center

Memorial Sloan-Kettering Cancer Center is seeking an individual to head the newly established Division of Experimental Pathology, reporting to the Chairman of the Department of Pathology. He/she will be responsible for the overall development of various laboratory programs dealing with the biology of human tumors, as well as programs to facilitate and maximize the transfer of biological findings into diagnostic, prognostic and therapeutic applications. This Division will have close interaction with anatomic pathology and will relate to other clinical and basic science departments in the Center.

The candidate for this position should possess an M.D. and/or a Ph.D., be an internationally recognized figure in research, and have proven ability as an academic leader. Background in the anatomic pathology of human cancer is desirable.

Interested applicants should send their curriculum vitae and bibliography and a brief description of research goals to:

Joseph R. Bertino, M.D.  
Chairman, Search Committee  
Memorial Sloan-Kettering Cancer Center  
1275 York Avenue  
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## POST DOCTORATE POSITION HELPING OTHERS LIVE A BETTER LIFE

### DNA PROBES DISCOVERY RESEARCH

*Boehringer Mannheim Corporation is one of the nation's leaders in the field of Medical Diagnostics, Biochemicals and Medical Research. This leadership has been attained through emphasis on quality and team effort. Due to our extensive growth, we have a one year assignment for a recent PhD-degreed Scientist to undertake a study of viral infectious diseases in our Indianapolis headquarters.*

*The qualified individual we seek should have experience in molecular biology, cloning, sequencing, gene amplification and tissue culture. Prior experience in probe assay development and formatting is preferred. Applicants with a PhD in the following specializations will be considered: Molecular Biology, Virology, Biochemistry or Genetics. This position has the potential to be extended to a second year.*

*At Boehringer Mannheim, we offer relocation assistance and an excellent compensation and benefits package. Qualified applicants should send resume with cover letter, for confidential consideration, to: Boehringer Mannheim, Dept. R.C., 9115 Hague Road, P.O. Box 50100, Indianapolis, IN 46250. An Equal Opportunity Employer.*

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## RESEARCH SCIENTISTS CYSTIC FIBROSIS

Our Cystic Fibrosis program aims to use either protein replacement or gene replacement therapy to develop new therapeutic products to treat this inherited disease. At present, both approaches are being actively pursued and Genzyme researchers have already made major contributions to Cystic Fibrosis research in this area. (Nature 347 358-363 1990, Nature 347 382-386 1990, Cell 63 827-834, Science 251 679-682 1991)

**Genzyme rewards success with an excellent compensation and benefits package, including 3 weeks paid vacation, a 401(k) plan with a company match, extensive insurance benefits and state-of-the-art facilities.**

Please forward your resume to: Jill Smith, Dept. S524, Genzyme Corporation, One Mountain Road, Framingham, MA 01701. An equal opportunity employer

We are seeking three Ph.D. level scientists with 2-5 yrs' post doctoral experience and a proven track record of successful research for the following areas:

## Protein Biochemistry

Responsible for membrane protein purification and characterization targeted to CFTR delivery to airways in animal models using liposome formulations. Experience in purification of membrane proteins and in the reconstitution of membrane transporters or channels into lipid bilayers and subsequent fusion into target cell membranes necessary.

## Cell Physiology

This position focuses on small animal pulmonary physiology and pharmacology to develop small animal models to deliver the CFTR protein and CFTR DNA to airway tissue using liposome or virosome aerosols. Experience with pulmonary cell biology and/or physiology is necessary; airway drug delivery, pharmacokinetics, and liposome surfactants and/or respiratory viruses experience is desirable.

## Molecular Biology

Perform molecular biology of expression viral vectors suitable for gene replacement therapy in the lung. Experience in recombinant DNA techniques and in creative gene cloning/expression is necessary; background in virology is advantageous.

# genzyme

## Who says the best things come to those who wait?

At Syntex, we're not only dedicated to producing safe and effective products. We're committed to making their path to the patient as efficient as possible. Our excellent record of successfully discovering and providing new therapies is proof that we're living up to our commitment. This kind of environment—where you can see the results of your work—is an ideal place to pursue your profession. If this sounds appealing, contact us about the following opportunities at our headquarters and main research facility in Palo Alto, California.

### Head, Quality Assurance and Advanced Technology

In this leadership position you will be responsible for planning and initiating a program to improve the quality of clinical data. This will involve the evaluation and implementation of appropriate new technology.

We require 7-10 years' relevant experience and an in-depth understanding of modern quality improvement methods and practices. Outstanding managerial, communication and project management skills are essential. MS in Computer or Life Sciences or other applicable field is also a must.

### Postdoctoral Fellow, Biochemistry

You will study the mechanism of

action of enzymes of purine biosyntheses, and will participate in the normal operations of the laboratory and the Institute of Cancer and Developmental Biology. PhD in Biochemistry is required, with additional coursework in Bio-organic Chemistry, Enzymology or Molecular Biology.

### Staff Researcher, Natural Products

You will be responsible for establishing and operating a laboratory devoted to the isolation and characterization of small to medium sized molecules from fermentation broth extracts. A strong background in micro scale isolation and structure elucidation techniques is essential. Experience with microbiological fermentation desirable. PhD in Chemistry with 2-4 years' experience is required.

Syntex is known for its collaborative multidisciplinary environment. We offer salaries commensurate with educational and experience levels, and a comprehensive benefits package which includes a Bay-area bonus, daycare facilities and an on-site fitness center in a beautiful campus-like setting. For immediate consideration, please send your resume to Professional Staffing, Dept. KM./SCI, Syntex, 3401 Hillview Avenue, Palo Alto, CA 94304. An equal opportunity employer. Principals only, please.



## BS/MS RESEARCH ASSOCIATES

The Upjohn Company, a recognized leader in the research, manufacturing and marketing of pharmaceutical, chemical and agricultural products, has several positions available for qualified BS/MS candidates with degrees in the biological sciences and relevant research and industrial experiences.

### BIOLOGY ASSOCIATE

The Upjohn Laboratories Division has a research associate position available for a biologist/cell biologist/biochemist in the Dermatology Research Group. This challenging position involves developing combinations of tissue culture and biochemical methodologies to study pharmacological mechanisms in skin and hair. The successful candidate will be experienced and have a strong technical background in quantitative *in vitro* research. **Position Code: 910242-030.**

### FERMENTATION MICROBIOLOGIST

The Fermentation Products Production Group is seeking an experienced microbiologist to work closely with staff from our Fermentation Plant and Bioprocess Research and Development Groups. The selected candidate will be responsible for the preparation and maintenance of cultures required for large-scale fermentations. This position will monitor key parameters and use judgment to implement changes during the fermentation process. Background in industrial microbiology, fermentation and statistics is necessary. **Position Code: 910188-031.**

Upjohn offers a very competitive compensation and benefits program including relocation assistance. The Kalamazoo area has a population of 225,000 and provides an excellent mix of cultural and recreational pursuits. Qualified candidates are invited to send their resumes to: The Upjohn Company, Corp. Recruiting/Research Associates, 7000 Portage Road, Kalamazoo, MI 49001. We are unable to consider Ph.D.'s for these positions. Please refer to one of the above Position Codes in your cover letter. An Equal Opportunity Employer M/F.

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### PHARMACOLOGY RESEARCH ASSOCIATES

The first position will perform a full range of central nervous system (CNS) pharmacology experiments, operate equipment for monitoring EEG, evoked potential and animal behavior, and perform classic *in vitro* pharmacology experiments. Will use a PC for candidate and data acquisition, entry and analysis. The selected candidate will also record experimental procedures and results in laboratory notebooks. We require a B.S. with at least 5 years experience or an M.S. with at least 2 years experience in CNS pharmacology research. **Reply to Job # 7613A.**

The second position involves studies on the effects of novel agents in animal models of inflammation. Relevant *in vivo* experience with small animals is necessary with a biochemical background and experience with data analysis helpful. We require a B.S. and at least 2-4 years related experience or an M.S. in Biology, Pharmacology or a related field. **Reply to Job # 7613B.**

### PHARMACOKINETICIST

Primary responsibilities include design, analysis and reporting of animal and clinical pharmacokinetic studies. Qualifications include a Ph.D. in Pharmacokinetics, Biopharmaceutics or related disciplines, with 2-6 years experience. The position requires a command of kinetics, drug metabolism, physiology, statistics and computing techniques. Written and oral communication skills are essential. **Reply to Job # 7612.**

### METABOLISM INVESTIGATOR

Responsibilities involve the design and implementation of studies investigating the absorption, distribution, metabolism and excretion of radiolabeled drugs in laboratory animals and humans. The individual we seek will have a Ph.D. or equivalent experience in Biochemistry, Pharmacology, Medicinal Chemistry or Toxicology with a minimum of 1-3 years experience. Experience in TLC, HPLC and GLC methods and derivatization techniques is essential. A background in *in vivo* drug disposition studies is desired. **Reply to Job # 7612B.**

Located 30 miles north of Chicago, Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. For consideration, please send resume to: **Patricia Handy, Corporate Placement, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** (To facilitate the handling of your resume, please indicate Job # on your cover letter or resume.) Abbott is an Affirmative Action Employer.

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## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Available immediately to study regulation of  $Ca^{2+}$  fluxes across cardiac sarcoplasmic reticulum by novel endogenous cytosolic proteins. Experience in protein biochemistry and molecular biology desired. Send curriculum vitae and three letters of references to: **Dr. N. Narayanan, Department of Physiology, University of Western Ontario, London, Ontario, Canada N6A 5C1.**

**POSTDOCTORAL POSITIONS.** Available immediately to study the role of *Agrobacterium* Virulence proteins in gene transfer to plants and to study the molecular mechanism of floral initiation in *Pharbitis nil* (Japanese morning glory). Candidates should have a recent Ph.D. in molecular biology, biochemistry, or genetics. Please send curriculum vitae and names of three references to: **Dr. Ananth Das, Department of Biochemistry, 1479 Gortner Avenue, University of Minnesota, St. Paul, MN 55108. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION.** Available utilizing molecular biological and biophysical techniques to study and modify the mechanism of heme enzymes. Experience desired in recombinant DNA methods of heterologous gene expression and site-directed mutagenesis or in spectroscopic tools such as EPR, electrochemistry, X-ray crystallography, CD, stopped-flow kinetics, or NMR applied to proteins. Send curriculum vitae and names of three references to: **Dr. David B. Goodin, Department of Molecular Biology MB8, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

**POSTDOCTORAL POSITION.** Available in multidisciplinary research group to study ultrastructural pathology and immunocytochemistry of CNS injury and regeneration. Project entails electron microscopy, freeze-fracture, and immunocytochemical analysis, and permits close collaboration with electrophysiologists, pharmacologists, and biophysicists. Send curriculum vitae and three letters of reference by 28 June 1991 to: **Stephen G. Waxman, M.D., Ph.D., Professor and Chair, Department of Neurology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, CT 06510. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITIONS.** Now available to study the molecular biology of prohormone processing enzymes required for synthesis of peptide hormones and neurotransmitters. This project involves molecular cloning and expression of proteases and their inhibitors involved in processing enkephalin, tachykinin, and other neuropeptide precursors. Experience in molecular biology and/or protein/peptide biochemistry are required. Candidate should have recently obtained a Ph.D. in molecular biology, biochemistry, molecular neurobiology, or appropriate discipline. Please send curriculum vitae and names of three references to: **Dr. Vivian Hook, Department of Biochemistry, Uniformed Services University of the Health Sciences, Bethesda, MD 20814.**

### POSTDOCTORAL POSITION SIGNALING BY INTEGRINS

Available 1 July 1991 to study regulation of second messengers by integrin receptors for extracellular matrix proteins. Requires Ph.D. in cell biology, molecular biology, biochemistry, or related area. Send curriculum vitae and names of three references to: **Dr. Martin Schwartz, Committee on Vascular Biology, Research Institute at Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

### POSTDOCTORAL POSITION HARVARD/CHILDREN'S HOSPITAL

Neuroscience position to study development and transplantation of neocortex, specifically neuronal migration and integration at cellular and ultrastructural levels. Projects involve cell culture and transplantation of defined donor neurons into selectively neuron-deficient hosts, generated by population-specific lesioning via chromophore-targeted cytolysis. Interest and/or expertise in murine neuronal culture, anatomy/pathology, immunocytochemistry, and electron microscopy are desired. Send curriculum vitae, state of research experience, and names of three references to: **Dr. Jeffrey D. Macklis, Neurology and Neuroscience, Enders 3, 320 Longwood Avenue, Boston, MA 02115.**

## POSITIONS OPEN



### UNIVERSITY OF MARYLAND AT BALTIMORE SCHOOL OF MEDICINE

#### POSTDOCTORAL POSITION CARDIAC PHYSIOLOGY

A postdoctoral position is available immediately for research in electrophysiology and excitation-contraction coupling of cardiac muscle. The research will involve the use of fluorescent ion-indicators, including imaging, and flash photolysis of caged compounds in single, voltage-clamped cardiac cells. Applicants should have a Ph.D. or M.D. and experience in electrophysiology. Interested individuals should send curriculum vitae and names of three references to: **Dr. W. Gil Wier or Dr. C. William Balke, Department of Physiology, University of Maryland at Baltimore, 660 West Redwood Street, Baltimore, MD 21201.**

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Available June 1991 for recent Ph.D. with experience in cell culture to examine the biochemistry of embryo implantation using an in vitro model system. Interest in uterine biology and expertise in protein biochemistry advantageous. NIH scale salary commensurate with experience. Please apply with curriculum vitae and names of three references to: **Dr. S. R. Glasser, Department of Cell Biology, Baylor College of Medicine, Houston, TX 77030. Men and women are encouraged to apply.**

#### POSTDOCTORAL POSITIONS IN YEAST GENETICS AND MOLECULAR BIOLOGY

Candidates to study the *Saccharomyces cerevisiae* mRNA transcription apparatus with emphasis on RNA polymerase II subunits. Several independent projects are available. Experience in molecular biology preferred and prior yeast experience is helpful. Enthusiastic, self-motivated candidates with other experience will be considered. The Roche Institute of Molecular Biology is an independent research institute funded by Hoffmann-La Roche in a suburban location 10 miles west of New York City. The institute has an academic-like setting with exceptional research resources and competitive salaries. Please send curriculum vitae and the names of three references to: **Dr. Nancy Woychik, Roche Institute of Molecular Biology, Nutley, NJ 07110. We are an Equal Opportunity Employer.**

#### POSTDOCTORAL POSITION

The Department of Neurosciences, University of California, San Diego, is seeking a qualified Ph.D. or M.D. for postdoctoral position to study molecular aspects of central nervous system ischemia and related aspects of neurodegenerative diseases. The position requires background in biochemistry or molecular biology. Animal models are used but clinical trial experience is available for appropriate candidates. Our current research focus is biochemical and molecular biological characterization of protein kinases and molecules involved in the phosphorylation cascade reactions. The position is available immediately. Salary is based on published University of California scales. Send curriculum vitae and names of three references to: **Justin Zivin, M.D., Ph.D., or Tsunao Saitoh, Ph.D., University of California, San Diego, Department of Neurosciences 0624, 9500 Gilman Drive, La Jolla, CA 92093-0624. The University of California is an Equal Opportunity/Affirmative Action Employer.**

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# Science

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SPECIAL CAREERS SECTION

## POSITIONS OPEN

### POSTDOCTORAL POSITION

A postdoctoral position is available to study the role and regulation of growth factors and their receptors in normal human melanocytes and malignant melanoma. Expertise in the area of molecular biology and/or cell biology is preferred. Interested candidates should send curriculum vitae and names of three references to: **Dorothea Becker, Ph.D., University of Pittsburgh, Department of Medicine, Pittsburgh Cancer Institute, Biomedical Science Tower, E1057, Pittsburgh, PA 15261.**

### POSTDOCTORAL POSITION MOLECULAR ONCOLOGY PROGRAM

Postdoctoral position available in research laboratory investigating mitogenetic pathways mediated by tyrosine kinases. Position is available 1 June 1991. Interested candidates should forward curriculum vitae and three letters of recommendation to: **Gary D. Kruh, M.D., Ph.D., c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** Telephone inquiries can be made by calling the Personnel Department at 215-728-2763. *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

A postdoctoral position is available to study the role of cellular and mitochondrial calcium in the control of respiration in rat heart (see *J. Biol. Chem.* **264**, 13430). Applicants should have a strong background in intermediary metabolism and bioenergetics. A familiarity with cell culture techniques and the fluorescence-based techniques for measurement of intracellular calcium would be beneficial. Send curriculum vitae and three letters of reference to: **Dr. Russell Scaduto, Department of Cellular and Molecular Physiology, College of Medicine, The Pennsylvania State University, P.O. Box 850, Drawer-SC, Hershey, PA 17033. Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL POSITION STRUCTURAL BIOLOGY/NMR

A postdoctoral position is available for someone interested in applying NMR techniques to problems in structural biology. Present areas of interest include hormone and growth factor structures and receptor interactions, proteins involved in intracellular regulation by tyrosyl phosphorylation, and the role of protein flexibility in enzyme action, protein/protein interactions, and protein/DNA interactions. Please send a biographical sketch and the names of three references to: **Dr. David Cowburn, The Rockefeller University, Box 299, 1230 York Avenue, New York, NY 10021-6399. FAX: 212-570-7566. The Rockefeller University's policy is to support actively equality of opportunity for all persons.**

### POSTDOCTORAL FELLOW

Individual with Ph.D. degree and with background in biochemistry and molecular biology or cell biology to work in nutritional developmental biochemistry laboratory in the Division of Neonatology. Preference will be given to individuals with background and expertise in molecular biological and cell culture techniques. Applicants should send curriculum vitae to: **Josef Neu, M.D., Department of Pediatrics, University of Florida, Box J-296, JHMHC, Gainesville, FL 32610-0296. Equal Employment Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOW.** The School of Forestry, Auburn University, is soliciting applications for a postdoctoral fellow in tree nutrition. This is a non tenure-track position supported by grant funds and is dependent upon continuation of grant funding. Ph.D. in forestry, plant biology, or plant ecology and a demonstrated research interest in genotype-environment interactions in tree seedlings with particular emphasis on nutrition are required. Applicant must be willing to travel and interface with forest industry, faculty, and graduate students. Candidate will be required to design and coordinate research projects, pursue extramural funding, and publish research results. Salary: \$24,000 to \$28,000. Closing date is 1 August 1991. Submit application, résumé, transcripts, and three letters of reference to: **Ms. Marjorie Gentry, Assistant to the Dean, School of Forestry, Auburn University, AL 36849-5418. Auburn University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

# Protein Purification Chemist

The Bristol-Myers Squibb Industrial Division is seeking a Protein Chemist for its newly expanded Biochemistry Department. Responsibilities include assisting in the development of GMP purification processes suitable for pilot scale production of clinical grade therapeutic proteins. You will also support the development of processes for scale-up of purification of cell culture and/or microbial proteins.

Requirements include a BS/MS in Protein Chemistry or Biochemical Engineering, with at least 2 years experience in purification of cell culture and/or recombinant microbial proteins for clinical applications in an industrial environment.

Bristol-Myers Squibb offers competitive salaries, attractive benefits, and opportunities for personal and professional growth. Please forward resume and salary history to: **Bristol-Myers Squibb Company, Industrial Division, Associate Director, Fermentation Development Pilot Plants-RFB, P.O. Box 4755, Syracuse, NY 13221-4755.** An Equal Opportunity Employer, M/F/H/V.



**Bristol-Myers Squibb Company**

# POSTDOCTORAL POSITIONS NEUROBIOLOGY

## Albert Einstein College of Medicine

Postdoctoral positions available in Neurobiology of Development and/or Degenerative Disease. Well established and well funded group is seeking candidates with training in Biochemistry and/or Molecular Biology. Please send CV and names of two individuals who can be contacted for references. Appointments are immediately available, but can be taken up anytime over the next twelve months. For informal contact, call Dr. Peter Davies at (212) 430-3083 or Dr. Bridget Shafit-Zagardo at (212) 430-2189. Send materials to: Dr. Peter Davies, AECOM, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Equal Opportunity Employer.

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## 1992 COMPETITION



## MERCK-AFCR FOUNDATION MD-PhD POSTDOCTORAL FELLOWSHIPS

### FIVE FELLOWSHIPS AVAILABLE

Merck Sharp & Dohme Research Laboratories, through its Academic Development Program, and the American Federation for Clinical Research Foundation announce the 1992 competition for the Merck-AFCR Foundation MD-PhD Postdoctoral Fellowships to support the further training of MD-PhD scientists.

### FELLOWSHIP TERMS

- \* Candidates must have completed an MD-PhD educational program and be accepted into a postdoctoral training program.
- \* Candidates must provide evidence of 2 years of clinical training or have completed residency training at the time the award begins (July 1, 1992).
- \* Fellowships are intended for independent research in the biomedical sciences, including the fields of: biological chemistry; cellular, molecular and structural biology; epidemiology; genetics; medical informatics; microbiology; immunology; pharmacology, physiology; pathology.
- \* Candidates must be citizens of the U.S. or Canada or permanent residents of the United States.
- \* Fellows must devote 80% of his/her time to research. Each Fellow will spend up to three days in the Merck Research Laboratories during his/her tenure as award recipient and present research results. Travel support will be provided for the Fellow's mentor. The Fellow must maintain membership in the American Federation for Clinical Research and must submit an abstract to and attend a Regional or National AFCR meeting each year.
- \* First-year support consists of a \$40,000 stipend and a \$3,000 allowance for travel, journal subscriptions and society memberships. In addition, the recipient's university will receive a \$7,000 grant for supplies related to the funded research. Indirect costs will not be allowed.
- \* Fellowships may be renewable on an annual basis for an additional two years, pending approval of annual progress reports.

### FELLOWSHIP APPLICATION TERMS

All applications must be submitted on the official Merck-AFCR Foundation MD-PhD Postdoctoral Fellowship application form. Each application must include:

- \* A curriculum vitae
- \* One page abstract of the proposed research
- \* A proposal of 8 to 10 pages, including background and references
- \* A statement of the applicant's career goals
- \* Two letters of recommendation
- \* Two reprints of published papers representative of the applicant's research
- \* A letter from the applicant's mentor describing how the proposed research will contribute to the applicant's development as a creative scientist.

### IMPORTANT DATES

Deadline for receipt of applications - July 15, 1991. Fellowship recipients will be notified by December 15, 1991. Fellowships begin July 1, 1992, unless otherwise agreed.

### FOR APPLICATIONS AND INQUIRIES:

Merck-AFCR Foundation Fellowship Program  
AFCR Headquarters  
6900 Grove Road  
Thorofare, NJ 08086  
Phone: 609-853-9129, Ext. 293  
Fax: 609-853-5991





## ASSISTANT PROFESSOR

**Brookdale Center for Molecular Biology  
and Molecular Medicine Division,  
Department of Medicine  
Mount Sinai School of Medicine**

Candidates are invited to apply for positions at the level of Assistant Professor. We are seeking individuals with a record of excellence in research who will apply skills in molecular biology to address problems relevant to molecular medicine. Candidates may have either M.D. or Ph.D. degrees. An essential requirement is an innovative research program complementing existing programs within the Brookdale Center and Molecular Medicine Division. Research areas of particular interest include: molecular and genetic basis of disease; molecular nephrology, developmental molecular biology; structure, function and regulation of receptors and channels; hormone, oncogene and growth factor actions; and vascular biology.

Candidates should submit a curriculum vitae and a statement of research interests, goals and plans. Letters from three references should be submitted. Send all materials to: **Dr. Andrew R. Marks, Brookdale Center for Molecular Biology, Molecular Medicine Division, Mount Sinai School of Medicine, Box 1126, One Gustave L. Levy Place, New York, NY 10029-6574. Phone: (212) 241-0309. Fax: (212) 860-9279.**

*Mount Sinai is an Equal Opportunity/Affirmative Action Employer.*

## CHAIRPERSON POSITION IN VIROLOGY AND IMMUNOLOGY

Applications and nominations are being sought for the position of Chairperson, Department of Virology and Immunology, Southwest Foundation for Biomedical Research.

The Foundation is a non-profit, basic biomedical research institution located in San Antonio, Texas. The department has a staff of 59 persons, of whom eight are doctoral level scientific staff members and nine are post doctoral scientists. Strong research programs in hepatitis, AIDS, SAIDS, and Simian B virus are underway.

The successful candidate will hold the George C. Hixon endowed Chair. A Ph.D. or M.D. degree with a distinguished research career in virology or immunology is required. Strong administrative and communicative skills are essential.

Interested individuals should send a curriculum vitae, statements describing interest and administrative experience, and the names, addresses, and telephone numbers of three references.

Send application to:

**Dr. Henry C. McGill, Jr.  
Search Committee Chairman  
Southwest Foundation for  
Biomedical Research  
P.O. Box 28147  
San Antonio, TX 78228-0147  
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**Bio-Méga Inc., located in suburb Montreal, a wholly owned subsidiary of the Boehringer Ingelheim group, is one of the most important pharmaceutical research laboratories in Canada.**

**We seek highly motivated professionals at the level of Ph.D. to join an interdisciplinary research team currently developing drugs for the treatment of hypertension and viral diseases.**

**The candidates should possess extensive experience in one or more of the following fields: biochemistry (especially in cellular or molecular biology) pharmacology or related scientific disciplines. They should have proven scientific and leadership qualities necessary to initiate and manage research projects in our departments of pharmacology or biochemistry.**

**Entry levels for these positions depend on qualifications. The chosen candidates will have the opportunity to work with state-of-the-art technology in an exciting and expanding research environment.**

**Please submit your resume to:**

**Director, Human Resources**

**Bio-Méga, Inc.,**

**2100 Cunard St. Laval (Québec) H7S 2G5**

**Tel: (514) 682-4640 FAX (514) 682-8434**

**PHYSICIST, ZP-1310-III**—The Quantum Metrology Division, Physics Laboratory, National Institute of Standards and Technology, Department of Commerce is seeking an experienced Physicist in the area of synchrotron radiation research in the x-ray region. The Division maintains and operates a high performance beamline at the National Synchrotron Light Source (Brookhaven). Duties of this position include: operation, technical improvement and provision of outside user services at the Division's Beamline Facility in Brookhaven. The incumbent will be required to undertake frequent travel to this site for periods of 1-2 weeks at a time and must qualify for a government motor vehicle operator's permit. The incumbent will participate in the established program of research and contribute to its evolutionary development. The incumbent is required to have knowledge of synchrotron radiation resources to resolve current problems in condensed matter physics (you must address your qualifications as a supplemental statement as it relates to this factor on a separate piece of paper and submit with your application for employment). Ph.D. in Physics preferred.

The position's starting salary is in the range of \$31,116-\$52,210 depending on qualifications and experience of the candidate. In order to apply to vacancy #NIST/DH-91-0590/KY, please send an Application For Federal Employment SF-171 including supplemental statement and transcripts or OPM Form 1170/17 and an official copy of your total driving record to:

**Ms. Kathy M. Yarmas  
Building 101, Room A-123  
National Institute of Standards and Technology  
Gaithersburg, MD 20899**

The National Institute of Standards and Technology is an Equal Employment/Affirmative Action Employer in Gaithersburg, MD. U.S. citizenship is required.

**CHAIR  
DEPARTMENT OF PHYSIOLOGY**

The Texas Tech University Health Sciences Center School of Medicine invites applications for the position of Chair of the **Department of Physiology**. Applicants should have a distinguished record in research, a commitment to training graduate students, medical students and postdoctoral fellows, and a desire to exercise strong and innovative leadership in building the Department to a level of national prominence. Preference will be given to candidates who have a record of consistent research productivity and support through extramural sources, and have served on grant review boards at the national level. Interested applicants should send their curriculum vitae, the names and addresses of three references, and a brief statement indicating their interest in the position to:

Sandra Sabatini, PhD, MD  
Chair, Physiology Search Committee  
Texas Tech University Health Sciences  
Center  
Department of Internal Medicine,  
Division of Nephrology  
Lubbock, Texas 79430

The search committee will begin initial folder review in June and will continue the search process until a chair is selected. Texas Tech University Health Sciences Center School of Medicine is an Affirmative Action Institution.

**PROTEIN X-RAY  
CRYSTALLOGRAPHER**

**National Institute of Allergy  
and Infectious Diseases**

**National Institutes of Health**

A protein crystallography laboratory is being established with intramural AIDS funding to conduct an original research program and to interact with other scientists within the NIH intramural program. Applicants for director of the crystallography lab are being sought. Ph.D. or M.D. applicants should have a record of achievement in solving protein structures by X-ray crystallography. Salary and research resources will be commensurate with credentials and research experience.

Applicants should send curriculum vitae and names and addresses of at least three references to:

John E. Coligan, Ph.D.  
Chairman, Search Committee  
BRB, NIAID, NIH  
Building 4, Room 413  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: 301-496-8247  
Facsimile: 301-402-0284

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**SCIENTISTS**

Researchers at TKT are pioneering new techniques in molecular and cellular biology in order to develop safe and effective treatments for disease. To accomplish our goals, we need highly motivated individuals who can interact and collaborate in a multi-disciplinary environment as we meet the demands of a highly competitive field.

■ **HUMAN GENETICS & GENOME MAPPING**

Members of this expanding research group are engaged in developing novel methods for the mapping and cloning of disease genes.

Five plus years' post-doctoral experience in human genetics and solid supervisory skills are necessary to direct the activities of this research team. Background in the establishment of pedigrees and RFLP mapping through pedigree analysis, plus in-depth knowledge of computer methods for linkage analysis are essential. In addition, we require individuals having extensive experience with yeast cloning systems, restriction enzyme and Southern blot analysis using pulsed-field gel electrophoresis, and cosmid mapping and ordering strategies.

■ **MOLECULAR BIOLOGY**

Our Molecular Biology Group is developing novel expression vectors for use in mammalian cells. This position requires extensive background in the areas of plasmid construction, *in vitro* mutagenesis, PCR and Southern blot analysis.

Additional qualifications include 3 years' post-doctoral experience in molecular biology. A proven research record involving the analysis of gene expression in mammalian cells using Northern blot analysis, S1 and primer extension mapping, nuclear run-off transcription and Western blotting is essential.

**TKT** offers competitive salaries and equity participation along with a comprehensive employee benefits package. Interested candidates should forward their resume to: Director of Human Resources

**TKT**

TRANSKARYOTIC THERAPIES INC., 195 ALBANY ST., CAMBRIDGE, MA 02139

The University of Queensland  
*Equal Opportunity in Employment is University Policy*

**Research Fellow/Senior Research Fellow  
Lipoprotein Scientist (Ref No. 17991)**

**Department of Medicine  
The University of Queensland  
Royal Brisbane Hospital, Australia, 4029**

A major joint project is planned to investigate a novel process based on plasma delipidation for the treatment of atherosclerosis. Accordingly, there will be two positions available for scientists with a minimum of a PhD and research experience in lipoprotein metabolism. The positions will be available immediately and the duration is until 31 December 1993. Salaries range from Aus\$33,163-\$43,096 for Research Fellows and from Aus\$43,984-\$51,015 per annum for Senior Research Fellows.

Applicants who are available for employment on short notice are encouraged to apply immediately by facsimile to Dr Bill Cham, Department of Medicine, The University of Queensland, Clinical Sciences Building, Royal Brisbane Hospital, Australia 4019. Fax: (+61-7) 365-5462. Telephone: (+61-7) 365-5155.

# Postdoctoral Fellowships

Genentech, a leader in the biotechnology industry, currently has the following exceptional opportunities:

## Cell Biology/ Electron Microscopy

This unique postdoctoral research position offers you the chance to be involved in the EM Group with Dr. Gilbert Keller in the design and implementation of strategies to study intracellular trafficking of proteins in a state-of-the-art facility. In determining sites and mechanisms of action of recombinant therapeutics, the laboratory staff interacts closely with molecular and cell biology groups within the company to study the internalization and transport of recombinant proteins and small peptides to different subcellular compartments within target cells. A PhD and experience in EM, cell biology and/or molecular biology is desirable. Dept. YSGK.

## Molecular Pathology

An exceptional opportunity exists for a Postdoctoral Researcher in our Pathology group within the Safety Evaluation department. The focus of your project will be to investigate and characterize specific pathogenic mechanisms manifest in transgenic mice to determine their relevance to human disease. Working closely with the transgenic group at Genentech, you will apply techniques both from pathology and molecular biology. A DVM with advanced training in veterinary pathology is required. A PhD with completion of pathology residency is preferred. Dept. YSNG.

Our progressive company offers an extensive benefits package which includes fully paid dental/medical/vision coverage for you and your dependents, child care facilities, free health club membership and an employee stock purchase plan. For immediate consideration, please send your resume, indicating dept. of interest, to Yvonne Davino, Genentech, Inc., Human Resources, 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.

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As one of the leading environmental and engineering consulting firms in the industry, Environmental Science & Engineering, Inc. has provided comprehensive services for a wide range of clients since 1965 and is still growing strong. Our multi-disciplinary firm includes over 1,200 employees in more than 30 cities across the United States.

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- ▲ Toxicologists
- ▲ Ecologists
- ▲ Analytical/Environmental Chemists
- ▲ Engineers/Geologists
- ▲ Air Quality Professionals

Those interested in joining a growing team should forward a resume and geographic preference to:

**Environmental Science & Engineering, Inc.**  
Dept. SC-1, P.O. Box 1703, Gainesville, FL 32602  
or call Kurt Adler, Recruiter, at 1-800-874-7872.



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## MOLECULAR BIOLOGIST

INTERESTED IN GENE EXPRESSION IN  
MAMMALIAN CELLS

The Surgery Branch of the National Cancer Institute has an immediate opening for a Senior Investigator to join its studies of the gene therapy of human cancer. This position involves a responsibility for studies of the introduction of genes into human lymphocytes and tumor cells using retroviral mediated gene transduction. The position involves responsibility for conducting independent research programs in this area and the supervision of junior scientists. Prior postdoctoral experience in molecular biology is required. Interested candidates should send a Curriculum Vitae and two letters of reference. For further information and application procedures, please contact:

**Steven A. Rosenberg, M.D., Ph.D.**  
Chief, Surgery Branch  
National Cancer Institute  
National Institutes of Health  
Public Health Service  
Building 10, Room 2B42  
9000 Rockville Pike  
Bethesda, Maryland 20892  
(301) 496-4164



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## Leadership Excellence Innovation



The Solar Energy Research Institute (SERI), located in Golden, Colorado, west of Denver, is the nation's primary federal laboratory for the study of renewable energy technologies and solar energy. Currently, we have the following opportunity in our Biotechnology Research Branch:

### Senior Molecular Biologist

Supervise cloning and molecular genetics research activities to improve organisms and enzymes for conversion of biomass to fuels, chemicals and materials. This individual will also design laboratory experiments, oversee their execution and supervise analysis of data and other information. This position will be responsible for maintaining a state-of-the-art cloning laboratory and establishing an interactive role with the research community.

Qualifications for this position include demonstrated knowledge and "hands-on" experience with modern techniques in recombinant technology, including a specialty in the expression of recombinant enzymes from rapidly growing bacteria, such as *E. coli* and *Bacillus* sp. Candidates must also train scientists in the application of state-of-the-art technology in this field. A Ph.D. in molecular biology, biochemistry, or microbiology plus a strong research publication record is required for this position.

We offer an excellent compensation and benefit program. For immediate consideration, please send resume to: **Human Resources Office, E2320-775, Solar Energy Research Institute, 1617 Cole Blvd., Golden, CO 80401.**

**Women and minorities are encouraged to apply.  
We are an equal opportunity employer.**



## BIOCHEMIST/ BIOLOGIST

The Pharmaceutical Biophysics Unit at Merck Sharp & Dohme Research Laboratories is currently seeking individuals to join a multidisciplinary group involved in the characterization, stabilization and formulation of protein therapeutics. The successful candidates will play a critical role in the basic research (structure/function) and development of protein pharmaceuticals.

**Protein Chemist** - Applicants with a B.S./M.S. in biochemistry, or related fields with biochemistry research experience, are invited to apply. Knowledge of protein physical biochemistry is desirable but not essential.

**Cell Biologist** - Applicants with a B.S. in biology or biochemistry are being sought to assist in the development of bioassays. Research experience in tissue culture techniques is essential and a working knowledge of microscopy and immunochemical techniques is desirable.

We provide a stimulating research environment with opportunities for collaborative interactions with various research groups. Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia.

Please send curriculum vitae with references, transcripts and cover letter to **Personnel Manager, Ad# C-16, Research Personnel, WP42-2, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486.**

EEO/AA/VH/Employer



**Merck & Co., Inc.**

## AN INVITATION TO SUBMIT NOMINATIONS FOR THE 1992 KING FAISAL INTERNATIONAL PRIZE IN SCIENCE

The General Secretariat of the King Faisal International Prize has the pleasure in inviting universities and specialist research centers throughout the world to nominate qualified candidates for the King Faisal International Prize in the topic of:

### "BIOLOGY"

Nominations must meet the following requirements:

1. Nominees must have accomplished an outstanding academic work on the Prize topic, benefiting mankind and enriching human progress.
2. Submitted work must be original and published.
3. Only recognized educational or research institutions may make nominations.
4. Each nomination should include:
  - a) an official letter to each nominee.
  - b) a typed list of the nominee's nominated works.
  - c) a typed CV of the nominee's academic background, experience and published works.
  - d) ten copies of each submitted work.
  - e) a copy of the nominee's certificates of education.
  - f) three recent coloured photos 4"×6".
  - g) the nominee's mailing address including:
    - (1) office address, telephone number, telex and fax.
    - (2) home address and telephone number.
5. Nominations will be evaluated by a Selection Committee consisting of highly recognized specialists in the topic.
6. More than one person may share the Prize.
7. The nominee's submitted work will not be accepted if:
  - a) any international organization has previously awarded it a prize;
  - b) it is a university degree;
  - c) it is not published.
8. The nomination will not be accepted if:
  - a) the nominee is dead;
  - b) it is nominated by individuals or political parties;
  - c) it does not meet all the prize conditions;
  - d) it is received after the announced date.
9. The Prize consists of:
  - a) a certificate in the winner's name containing an abstract of the work that qualified him/her for the Prize;
  - b) a gold medal;
  - c) a sum of three hundred and fifty thousand Saudi Riyals (approximately US \$93,333).
10. The winner(s) name(s) will be announced in February 1992, and the Prize will be awarded in an official ceremony at a later date.
11. The latest date for receiving the complete nomination requirements will be October 1, 1991.
12. No nomination papers or works will be returned to the senders, whether or not the nominee was awarded the prize.
13. All correspondence must be sent by registered airmail to:

The General Secretariat  
King Faisal International Prize  
P.O. Box 22476, Riyadh 11495  
Kingdom of Saudi Arabia

Tel 4652255  
TLx 404667 PRIZE SJ  
Fax 4658685  
Cable JAEZAH

## POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available October 1991 to study molecular aspects of autoimmunity. Applicant will use molecular modification to investigate the role of C-reactive protein in autoimmune disease. *U.S. citizenship* and experience in molecular biology, protein chemistry, or immunology required. Applicants should send curriculum vitae to: **Terry W. DuClos, M.D., Ph.D., Department of Medicine, University of New Mexico, School of Medicine, Albuquerque, NM 87131.**

**POSTDOCTORAL FELLOWSHIPS.** In cell biology of fertilization and early development, University of California, Davis. Fellowships are available in NIH-sponsored, multidisciplinary training grant. (Starting dates any time from 1 September 1991 to 1 July 1992.) *At appointment, trainee must be U.S. citizen or permanent visa holder.* Write: **Dr. Stanley Meizel, Department of Cell Biology and Human Anatomy, School of Medicine, University of California, Davis, CA 95616.** *University of California is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP

The University of Texas Medical School at Houston Vascular Biology Research Center has immediate availability of two NIH-funded postdoctoral positions to study the regulation and the structure-function relationship of enzymes catalyzing the arachidonic acid metabolism in the interdisciplinary program with a group of senior investigators with expertise in molecular biology, enzymology, protein chemistry, and cell biology. Candidates should send curriculum vitae and three letters of recommendation to: **Dr. Kenneth K. Wu, Department of Internal Medicine, Division of Hematology/Oncology, University of Texas Health Science Center at Houston, 6431 Fannin, Room 5.016, Houston, TX 77030.** *The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

**POSTDOCTORAL FELLOW, HIV VIROLOGY AND MOLECULAR BIOLOGY.** Applications are invited for a postdoctoral position for 2 to 3 years of research in HIV virology and molecular biology. Interests of the laboratory include molecular mechanisms underlying latency of HIV infection and precise mechanisms of action of inhibitors of HIV replication and gene expression. Stimulating research environment, with opportunities for interaction with several laboratories engaged in a joint interdisciplinary program project studying the pathogenesis of AIDS, including structure-function relationships of retroviral proteins, viral envelope-CD4 interactions, and cellular immunology. Newly completed, state-of-the-art P3 facility dedicated to HIV virology is adjacent to the laboratory. Qualified candidates should possess an M.D. and/or a Ph.D., with a strong background in molecular biology, cell culture, and virology or immunology. A statement of research interests and previous experience, curriculum vitae, and the names and addresses of three references should be sent to: **Israel Lowy, M.D., Ph.D., Department of Medicine, Columbia University College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032.**

### POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE ALCOHOL RESEARCH CENTER INDIANA UNIVERSITY SCHOOL OF MEDICINE

Two postdoctoral positions are available beginning fall 1991 to study the role of biochemical, neuroendocrine, and genetic factors in alcohol drinking behavior and alcohol tolerance using an animal model of alcoholism. Both positions use neuropharmacological techniques to study the neurotransmitter and neuropeptide systems involved in drug self-administration. One position (Dr. J. M. Murphy) concentrates on behavioral pharmacology and neurochemistry. The other position (Dr. J. C. Froehlich) focuses on neuropeptides and molecular biology. Salary ranges \$18,800 to \$26,500 (commensurate with experience). Send curriculum vitae and three references to: **Dr. J. M. Murphy, Institute of Psychiatric Research, 791 Union Drive, Indiana University School of Medicine, Indianapolis, IN 46202** or to: **Dr. J. C. Froehlich, Emerson Hall 321, 545 Barnhill Drive, Indiana University School of Medicine, Indianapolis, IN 46202.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN



Ecogen Inc., an agricultural biotechnology company located in the Philadelphia area and specializing in microbial pesticide development and biological control, has immediate openings for the following positions:

- **Ph.D. RESEARCH SCIENTIST:** Microbial physiology (experience with small-scale fermentation helpful)
- **Ph.D./M.S. POSTDOCTORAL ASSOCIATES/RESEARCH ASSOCIATES:** Molecular biology/microbial genetics, cell physiology and biochemistry, field research
- **M.S./B.S. RESEARCH ASSOCIATES/RESEARCH ASSISTANTS:** Microbial genetics, pilot scale fermentation (microbiology or biochemical engineering background)

Interested candidates should submit a current résumé including the names, addresses, and telephone numbers of three references to:

**Human Resource Department (Sci591)  
Ecogen Inc.  
2005 Cabot Boulevard West  
Langhorne, PA 19047-1810  
*Ecogen is an Equal Opportunity Employer.***

### MOLECULAR GENETICS BOSTON UNIVERSITY

Position for one **POSTDOCTORAL FELLOW** and one **TECHNICIAN**.

The technician will perform molecular and histological techniques required in situ hybridizations. Histology background desirable, we will train.

The postdoctoral fellow will work on the structure/function of apolipoproteins or the transcriptional regulation of the apolipoprotein genes. Salary: NIH scale. Send curriculum vitae to:

**V. Zannis  
Molecular Genetics  
Boston University Medical School  
80 East Concord Street  
Boston, MA 02118**

### POSTDOCTORAL RESEARCH ASSOCIATE.

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

### POSTDOCTORAL TRAINING IN VASCULAR BIOLOGY SCRIPPS RESEARCH INSTITUTE LA JOLLA, CALIFORNIA

Fundamental studies of the molecular biology of cells of the vasculature and structure and function of proteins relevant to vascular disease. Applicants should be about to complete, or have recently completed, doctoral training in molecular biology, cell biology, or biochemistry. Contact: **Mark H. Ginsberg, M.D., Program Director, Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037.** *Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSOCIATE.** Ph.D. in biochemistry with three or more years of experience. Background in immunology and experience in flow cytometry and cell sorting preferred. Salary commensurate with experience and training. Send résumé with letters of recommendation to: **Dr. Wayne L. Ryan, University of Nebraska Medical Center, Department of Obstetrics and Gynecology, 600 South 42nd Street, Omaha, NE 68198-4515.** Applications accepted until position is filled. *Equal Employment Opportunity/Affirmative Action Employer.*

Don't forget to look at other career opportunities in the special "Careers Section" in the center of this issue of *Science*.

## POSITIONS OPEN

**IMMUNOCHEMIST AND IMMUNOLOGIST.** National Cancer Institute, National Institutes of Health (NIH), Public Health Service, is seeking applicants for the following positions: **IMMUNOCHEMIST:** To work closely with molecular biologist and immunologists to define new strategies and methodologies for the radiolabeling and analysis of novel genetically engineered forms of training. **IMMUNOLOGIST:** To analyze and define the host's immune response in antitumor active immunotherapy systems using recombinant vaccinia constructs, peptides, etc., and study the interactions of various effector cell populations with novel recombinant forms of Ig's; will also interact with molecular biologists in gene therapy experiments. Preference for at least 3 years of postdoctoral training. Salary commensurate with experience. Please submit curriculum vitae, bibliography, and names of three references to: **Dr. Jeffrey Schlom, Laboratory of Tumor Immunology and Biology, National Cancer Institute, Building 10, Room 8B07, NIH, 9000 Rockville Pike, Bethesda, MD 20892.** *U.S. citizenship and/or permanent residency required depending upon type of appointment. An Equal Opportunity Employer.*

### INSECT PATHOLOGIST U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE (ARS)

The Medical and Veterinary Entomology Research Laboratory, Gainesville, Florida, seeks a **RESEARCH ENTOMOLOGIST** to study fungi as pathogens of mosquitoes and to develop integrated management strategies for their use in aquatic environments. Successful candidate must have knowledge of the: (i) isolation and characterization of fungi pathogenic for mosquitoes; (ii) growth, reproduction, development, and propagation in fungi pathogenic for mosquitoes; and (iii) infective processes in fungi for mosquitoes, alternate hosts, and nontarget organisms. Candidate must have skill in the field use of pathogens for mosquitoes and in the development of strategies for the use of pathogens in integrated management systems. Salary commensurate with qualifications and experience. For further information, contact **Dr. Donald R. Barnard** at 904-374-5930. To apply for this position, contact (after 30 May 1991): **USDA, ARS, Demonstration and Delegated Examining Unit** at 301-344-3960. The announcement will be open from 30 May 1991 to 21 June 1991. *ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### RESEARCH ASSOCIATE

A postdoctoral fellowship in experimental pathology/molecular biology of retroviral infections and AIDS at the Armed Forces Institute of Pathology (AFIP) is immediately available. Project areas include quantitative PCR and combined PCR/in situ hybridization for the detection of retroviruses in tissue sections. Salary ranges from \$35,000 to \$44,000 depending on experience and qualifications plus excellent fringe benefits. Duration: 2 to 3 years. Send curriculum vitae to: **Dr. Allen Burke, Cardiovascular Pathology, AFIP, Washington, DC 20306-6000.**

**RESEARCH ASSOCIATE** for university in central Ohio. Examines the metabolism of two anti-inflammatory drugs (para-aminobenzoic acid and para-aminosalicylic acid) by the neutrophil oxidant hypochlorous acid (HOCl) to develop a method for detecting HOCl release in vivo; performs experiments in reagent systems, enzyme systems, cell systems, animal models and humans; responsible for animal protocols; performs simple surgery, bronchoscopy, blood gas analysis and mechanical ventilation on animal subjects. No experience required in the job described but applicants will qualify with the following: M.S. in physiology or biochemistry and 2 years of research experience in biochemistry involving neutrophil oxidant HOCl, high-performance liquid chromatography and gas chromatography, cell separation, bronchoalveolar lavage processing and tissue culture on human and animal subjects and performing simple surgery, bronchoscopy, blood gas analysis and mechanical ventilation on animal subjects; at least 2 years in statistical analysis. Forty hours per week, 8 a.m. to 5 p.m., Monday to Friday; salary: \$23,600 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **S. Holton, JO#1260266, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

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## **Research Scientists**

*Ethicon, a leading member of the Johnson & Johnson Family of Companies, has long recognized that research and development represents both the foundation and the future of our company. The efforts of our scientists have helped make Ethicon the world leader in the manufacture of surgical products for wound closure, while a major commitment to new product development has fostered many new and exciting opportunities.*

*The expansion of our research efforts has created opportunities for scientists who possess an advanced degree in immunology, microbiology, pathology, pharmacology, physiology, or polymer/adhesive/analytical chemistry.*

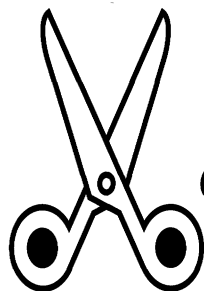
*At our state-of-the-art facilities, conveniently located within an hour's drive from Philadelphia and*

*New York, you'll find that innovation is encouraged and talent is recognized and rewarded. In addition to a competitive salary, you'll enjoy the full complement of Johnson & Johnson benefits, which include an on-premises total health and wellness facility, medical and dental plans and tuition reimbursement. Our work environment is smoke free. Please send your resume to: Employment Department, S-524, Ethicon, Inc., P.O. Box 151, Somerville, NJ 08876-0151. We are an equal opportunity employer M/F/H/V.*

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# SCIENCE

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## Your Talent Can Lead You To Extraordinary Opportunities.

Celtrix Laboratories, Inc., a biopharmaceutical research and development company, offers a "start-up" environment combined with an established management track record. This unique combination attracts individuals who are challenged by new opportunity with an innovative organization well recognized in R&D.

### Research Scientist

As a Research Scientist in our Process Development group, you will be responsible for scale-up and production of recombinant growth factors. A Master's or Ph.D. degree in Biology, Chemistry, Bioengineering or a related field with 3+ years of experience is required. Previous experience with process development in cell culture and/or fermentation is also required. Pilot plant GMP experience and a familiarity with culture conditions and optimization are desirable.

### Postdoctoral Scientist

As a Postdoctoral Scientist in our metabolic bone disease program, you will work within a multidisciplinary research team that promotes scientific synergy and creativity. Specifically, you will be involved in investigating the role of peptide growth factors as they relate to the regulation of bone formation and resorption. This position requires a Ph.D. in Biochemistry, Physiology, Endocrinology or a related discipline.

### 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.

Celtrix employees have an opportunity to make a significant impact in a stimulating environment that fosters autonomy, responsibility and innovation. Celtrix offers an excellent salary and benefits package. For immediate consideration, please send resume to: Celtrix Laboratories, Inc., Human Resources, 2500 Faber Place, Palo Alto, CA 94303. An equal opportunity employer.



## MACROPHAGE IMMUNOLOGIST

The Upjohn Laboratories Division of The Upjohn Company has a Research Scientist position available for a Ph.D. immunologist or cell biologist to join an interdisciplinary group focused on arthritis research. The selected scientist will design and establish an independent research program to study the role of macrophages in the immunoregulation of inflammation and arthritis. The research activities will include the discovery and evaluation of novel anti-inflammatory drugs by studying macrophage functions in vitro and in vivo in animal models of autoimmune disease.

Candidates should have a Ph.D. degree and 2-10 years of experience in macrophage immunology, cell biology or inflammation research. Experience with animal models of arthritis is preferred. A highly competitive compensation and benefits program is offered including relocation assistance. Upjohn Laboratories offers a stimulating, multidisciplinary research environment at our facilities in Kalamazoo, a southwestern Michigan city of 225,000, located midway between the Chicago and Detroit metropolitan areas. Our region provides an outstanding mix of cultural and recreational pursuits along with a four season climate. Qualified candidates are invited to send their curriculum vitae to: The Upjohn Company, Corp. Recruiting/Position Code 900485-020, 7000 Portage Road, Kalamazoo, MI 49001 USA. An Equal Opportunity Employer M/F.

*Our Commitment to Scientific Excellence Continues...*

**Upjohn**

## Vice President Research and Development

**Molecular Biosystems, Inc.**, a San Diego based biomedical products company, is a leader in the development of ultrasound, MRI and other contrast imaging agents. We are currently seeking a qualified individual to become Vice President - Research & Development to manage, continue, and expand MBI's current contrast imaging agent programs, as well as to formulate new R&D programs which are consistent with our strategic plan. This newly created position will report directly to the President and Chief Operating Officer.

We are seeking a leader with a proven track record in administering and managing a complex R&D department in a major contrast imaging agent (or related pharmaceuticals) operation. Candidates should also have extensive experience supervising senior scientific and technical personnel and significant product development achievements. A minimum of eight years industry experience and a relevant Ph.D. and/or M.D. degree is required.

MBI is an equal opportunity employer and offers competitive compensation, including stock options. MBI also offers a very appealing professional environment and the opportunity to make an impact in the exciting field of medical imaging. Send resume with salary requirements to: **Molecular Biosystems, Inc.**, Human Resources Dept., 10030 Barnes Canyon Road, San Diego, CA 92121.



*An Equal Opportunity Employer*

# NEUROSCIENCE RESEARCH

The ICI Pharmaceuticals Group, dedicated to the challenge of discovering and developing important new therapeutic agents, is seeking pharmacologists for the CNS drug discovery research group based in Wilmington, Delaware. The successful candidates will be part of an interdisciplinary team involved in exploring the interactions of neuropeptides and neurotransmission. The environment offers modern laboratory facilities supported by state-of-the-art technology.

## Neuroscientist/Molecular Pharmacologist

PhD in Pharmacology/Biochemistry with a minimum of 3 years' postdoctoral experience required. Proven application of molecular biology concepts and techniques, including gene cloning and transfection into mammalian cells necessary. Experience with receptor-mediated second messenger coupling mechanisms desired.

## Research Associate

An industrial research position sponsored by the Department of Pharmacology of the University of Pennsylvania. One year appointment with the potential to renew. Experience and research interests in neurochemical pharmacology and tissue culture techniques required. Knowledge of molecular biology preferred.

*Enjoy the benefits of belonging to a worldwide organization  
with the professional and financial resources  
to support and sustain aggressive long-term research.*

For consideration, submit c.v. to **Rose S. Buono, Human Resources, ICI Pharmaceuticals Group, Concord Pike and New Murphy Road, Wilmington, DE 19897.**



**Pharmaceuticals**

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**ImmuLogic is creating novel therapeutic products to modulate and monitor the human immune system. We employ state-of-the-art techniques and proprietary knowledge in immunology, biochemistry, and molecular biology to develop products in allergy and autoimmune disease areas. We collaborate with world leaders in the pharmaceutical industry and in academic institutions and are recognized as a leading force among companies focusing on immunology. ImmuLogic provides an outstanding working environment and a unique opportunity to broaden your scientific and technical knowledge.**

## SCIENTISTS

**Molecular Biology** This individual will participate in our Diabetes Research program and be responsible for developing novel methods of antigen identification and for coordinating the molecular biology efforts within this program. This will involve the construction of cDNA libraries and the development of eucaryotic and procaryotic expression systems.

Requirements: Ph.D. in Molecular Biology or related field with molecular biology emphasis; 2-5 years postdoctoral experience, or equivalent. Experience with tissue culture and immunological techniques highly desirable.

**Biophysics** This individual will investigate the structure function relationship between HLA proteins and antigenic peptides, develop assay systems to monitor this interaction, and investigate the structural requirements for binding.

Requirements: Ph.D. in Biochemistry/Chemistry/Biophysics or related field; 2-5 years postdoctoral experience or equivalent; and understanding of relationship between protein structure and function. Research experience with cell surface receptors and/or ligand binding desirable.

ImmuLogic offers a competitive salary and excellent benefits package, plus equity participation through an incentive stock program. Please forward your resume and cover letter to: **Human Resources, ImmuLogic Pharmaceutical Corporation, 855 California Avenue, Palo Alto, CA 94304.** An Equal Opportunity Employer

**IMMULOGIC**  
Pharmaceutical Corporation



SET THE PACE

## BE PART OF A NEW ERA IN IMMUNOTHERAPEUTIC DRUG DEVELOPMENT.

Procept, Inc., is forging new ground in the discovery of novel drugs by combining our proprietary receptor technology with rational drug design. We are rapidly expanding all of our scientific research programs aimed at major disease markets, and these programs require a diverse selection of talented scientists to bring forth their best ideas and creative spirit for the benefit of human therapeutic needs.

## DIRECTOR MOLECULAR BIOLOGY

We seek a senior-level scientist capable of directing the efforts of our high-powered team of molecular and cell biologists. Candidates should have 7+ years of professional experience beyond the postdoctoral level, and proven expertise in managing a successful research team. Strong management skills and the ability to attract, motivate, and supervise top quality scientists are essential.

## IMMUNOCHEMISTRY

A Ph.D. level scientist with 2+ years postdoctoral experience is sought to participate in a variety of drug development programs. Pertinent technical skills should include assay development, immunoprecipitation and epitope analysis. This position demands innovation and creativity.

## PROTEIN BIOCHEMISTRY

Exceptional opportunities exist for Ph.D. and BS/MS level protein biochemists in our expanding T-cell Receptor program. Candidates must be skilled in modern methods of protein isolation and functional characterization. A background investigating protein-ligand interaction would be a definite asset.

## IMMUNOLOGY

A dynamic immunologist (Ph.D. level) is needed to initiate an autoimmune program that will develop therapeutic strategies targeting T-cells and their receptors. Considerable experience in animal models of autoimmune disease is essential.

## PROKARYOTIC EXPRESSION/ MICROBIAL FERMENTATION

We seek both Ph.D. and BS/MS level molecular biologists/microbial physiologists who will focus on optimizing recombinant protein expression in bacterial systems. Experience with current bench level fermentation technology is required.

Procept offers you an excellent compensation program including incentive stock options, a working environment laced with entrepreneurial spirit, a vast network of academic advisors for developing important collaborations, and we encourage the publication of research findings in the scientific literature. Please forward your resume, in confidence, to Human Resources, Procept, Inc., 840 Memorial Drive, Cambridge, MA 02139.

Equal Opportunity Employer

**PROCEPT**

## EMBRYONIC STEM CELL TECHNOLOGY

Merck Sharp & Dohme Research Laboratories has two new openings for Molecular Biologists with experience and interest in Embryonic Stem Cell Technology.

**Ref. #S-19:** This opening is for a senior scientist with experience in Embryonic Stem Cell Technology, who will apply his/her expertise to a variety of collaborative projects within Merck's research labs, as well as being able to develop his/her own project area. The ultimate goal is to develop models of specific human diseases. This is an exciting opportunity to participate in an expanding research area in Basic Animal Science Research, for which new laboratory space has been assigned.

In addition to having experience with Embryonic Stem Cell Technology, the successful candidate will have a Ph.D., or equivalent, in Molecular Biology and several years of relevant postdoctoral experience. The applicant's practical skills should be complemented by a high level of initiative and superior communication skills.

**Ref. #S-20:** This opening is for a junior Molecular Biologist, who will assist with a variety of research projects involving recombinant DNA technology and Embryonic Stem Cell culture.

A B.S., M.S., or equivalent, in Biology is required. Also required is at least two years of experience in Embryonic Stem Cell culture. Experience with recombinant DNA technologies would be a definite advantage.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey, approximately 25 miles from New York City. Our facilities are state-of-the-art and our research environment is world-renowned. Our salaries, benefits and growth potential are excellent. For consideration, please send your resume, the Ref. #, and the names of three references to: **Human Resources Manager, Merck & Co., Inc., P.O. Box 2000, WBC-155, Rahway, NJ 07065.** We are an equal opportunity/affirmative action employer m/f/v/h.



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## COMPUTATIONAL CHEMIST

Boehringer Ingelheim Pharmaceuticals, Inc. is a major researcher, developer and manufacturer of prescription drug products used in the treatment of cardiovascular, pulmonary, viral and immune-mediated diseases. The Computational Chemist we select will join our rapidly expanding research and development center located in **DANBURY, CT.**

We are seeking an experienced individual to lead our Computer Assisted Molecular Design Group. Applicants should be well versed in quantum mechanical methods and all aspects of modeling, especially enzyme inhibitor interactions. The successful candidate will work in a drug discovery program dedicated to the development of therapeutically useful enzyme inhibitors.

Boehringer Ingelheim offers a competitive compensation and benefits package, including a generous relocation assistance program for those that qualify and a company matched 401K plan. Our atmosphere is energetic, dynamic and people oriented.

To explore your career options at Boehringer Ingelheim Pharmaceuticals, Inc., send your resume to:

Dept. JC-CC-1S, Boehringer Ingelheim Pharmaceuticals, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877.

*We are an equal opportunity employer m/f/h/v. As a progressive health care company, we have a nonsmoking environment.*



**Boehringer Ingelheim**



### STAFF SCIENTISTS CELL AND MOLECULAR BIOLOGY

**Cytel** is a rapidly growing biotechnology company pursuing recent breakthroughs in immunology, glyco-biology, and adhesion molecules. The company focus is on the discovery and development of novel regulatory molecules through innovative concepts in rational drug design.

We are seeking talented, dedicated molecular biologists and cell biologists to join our in-house research programs in the areas of cell adhesion in inflammation and metastasis, analysis of MHC/T-cell interactions, identification and analysis of autoantigens in autoimmune disease, and signal transduction and nuclear signalling during inflammatory responses. The ideal candidate will have a PhD and be knowledgeable and/or interested in one or more of these areas and will be highly skilled in the molecular and/or cell biological arts.

We offer competitive salaries and excellent benefits. Interested applicants please send resumes c/o **Dept. MK** to:

**CYTEL CORPORATION**  
11099 N. Torrey Pines Rd., #100, La Jolla, CA 92037

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## Toxicologist

**The Campbell Soup Company** currently has a unique opportunity for you to use your scientific experience outside of the lab to improve the way we do business. If you have a recent PhD in Toxicology or related scientific discipline and an enthusiastic commitment to technical quality and excellence, this is the career you've been waiting for.

You will provide toxicological expertise in pesticide/environmental toxicology and safety assessment, as well as in chemical safety evaluation including the design and management of safety evaluation studies. You will also be responsible for developing corporate strategies and programs addressing a broad array of toxicological, regulatory and scientific issues. Because you will interact with internal departments, consultants, technical experts and professional/trade organizations in this high visibility position, your excellent organizational, communication and leadership abilities are essential.

Be part of the driving force that has made **Campbell's** a \$6 billion player in the international food industry. In addition to tremendous growth opportunities, we'll reward you with an outstanding total compensation package. For immediate consideration, please send your resume, with salary requirements, to: **Dept MML, Campbell Soup Company, Campbell Place, Box 35D, Camden NJ 08103-1799.** Equal Opportunity Employer.

*Campbell Soup Company*

## Post-Doctoral Position

### National Institute of Diabetes and Digestive and Kidney Diseases Phoenix, Arizona

A post-doctoral fellowship is available immediately for a recent Ph.D. or equivalent experience in biochemistry or related discipline to participate in studies of the mechanism by which insulin regulates Protein Tyrosine Phosphatase activity. Results of studies conducted in our laboratory suggest that abnormal regulation of skeletal muscle PTPase activity by insulin may be the primary defect responsible for insulin resistance and subsequent development of non-insulin dependent diabetes mellitus in humans. Available projects include: expression of new PTPase cDNAs from human muscle, purification and characterization of the expressed proteins, and mechanisms of regulation of these PTPases by covalent modification.

This position is funded through the NIH Intramural Research Training Award Program and has a starting annual stipend of \$25,000 - \$28,000, depending on length of previous post-doctoral experience.

Send curriculum vitae and letter of application to:

**James Sommercorn, Ph.D.**  
**Clinical Diabetes and Nutrition Section**  
**National Institutes of Health**  
**4212 North 16th Street**  
**Room 541**  
**Phoenix, Arizona 85016**

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And, our reputation within government agencies and private industry is well-established. We've been asked to contribute to the development and evaluation of many EPA protocols.

If you're a **Chemist**, choose a career with the best network while making a solid contribution to the future of the environment. Forward a resume to Enseco today: Director of Human Resources, Enseco, Inc., 2200 Cottontail Lane, Somerset, NJ 08875-6745. An Equal Opportunity Employer.

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## Neuropharmacologist

Molecular Devices is looking for a Neuropharmacologist to support its new silicon biosensor-based microphysiometer system, to be introduced commercially at the end of this year. Early versions of the system have been used for pharmacodynamic studies of drug agonists and antagonists on a range of cells with native or transfected receptors.

Responsibilities will include designing and teaching training workshops at MDC, presenting seminars at outside sites, and maintaining close scientific relationships with our most innovative customers and academic collaborators. Additionally, you will troubleshoot and oversee the evaluation of cells and effector agents sent to us in the course of pre-sales activities.

A PhD and a minimum of three years' experience in pharmacodynamics in a major drug company, with hands-on experience in second messenger assays and/or electrophysiology, are required.

Molecular Devices offers a competitive compensation and benefits package. Please address inquiries plus curriculum vitae to: Dr. Gillian Humphries, Molecular Devices Corporation, 4700 Bohannon Drive, Menlo Park, CA 94025. FAX: (415) 322-2069. EOE.

 **Molecular  
Devices**

## THE AARON DIAMOND FOUNDATION POSTDOCTORAL RESEARCH FELLOWSHIPS IN THE BIOMEDICAL AND SOCIAL SCIENCES

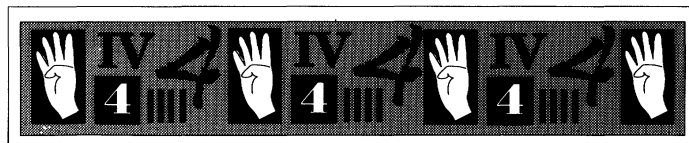
The Aaron Diamond Foundation in New York City announces the establishment of 25 postdoctoral research fellowships in the biomedical and social sciences focusing on AIDS or drug abuse. The purpose of the fellowships is to attract promising investigators to academic and research institutions in New York City and to encourage increased research into understanding and solving two of today's most pressing public health problems.

### Fellows are paid annual stipends beginning at \$36,000.

Each fellowship is for two years, with an option for a third year. Applicants must have an M.D. or Ph.D. in the biomedical or social sciences. M.D.s should have completed at least two years of clinical training and received their degrees no earlier than 1984. Ph.D.s are eligible immediately after graduation. The fellowships are open to all U.S. citizens and qualified foreign applicants who have applied for U.S. citizenship. Women and members of minority groups are encouraged to apply. Applications are accepted through mentors at New York City institutions who have agreed to sponsor a particular applicant. Mentors participating in the fellowship program are listed in the application materials. The mentor's institution received \$30,000 to cover the fellow's fringe benefits, travel and research costs.

### For further information and application forms contact:

New York State Health Research Council, Office for the Aaron Diamond Foundation Postdoctoral Research Fellowships, 5 Penn Plaza, Room 308, New York, NY 10001; (212) 613-2525.



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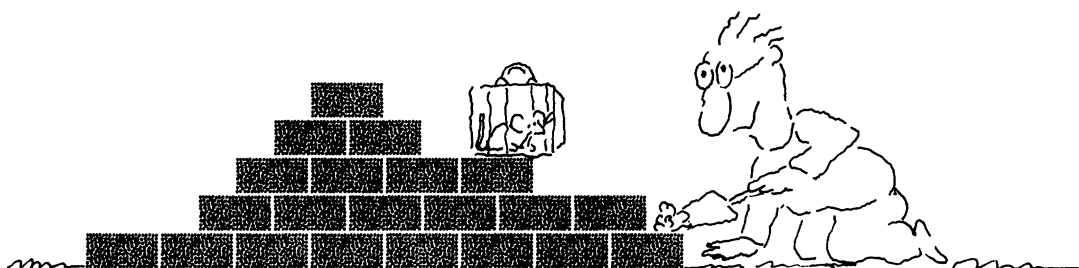
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The position will be filled on or before July 1, 1992. Applications, along with names of three references, should be sent no later than July 15, 1991 to: *Professor William H. Smith, Chairman, Dean Search Advisory Committee, Dean's Office, Yale University, School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, Connecticut 06511; (203) 432-5109, FAX: (203) 432-5942.*



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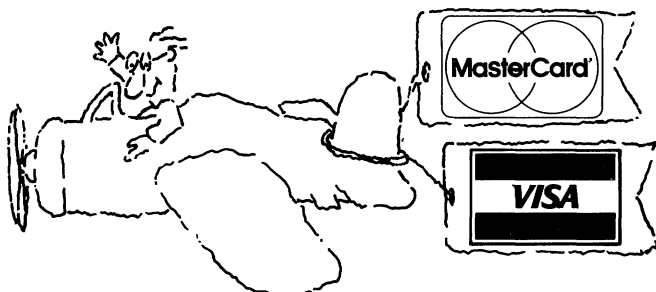
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**RESEARCH SCIENTIST.** Ph.D. in biochemistry, experimental pathology, pharmacology, or related field with at least 2 years of postdoctoral research experience. Hands-on experience with small animal surgery (rat, rabbit, dog), SDS-PAGE, spectrophotometry, immunohistochemistry, scintillation spectrometry, tissue culture, all highly desirable. Send curriculum vitae, statement of interests, two reprints, and names of three references to: **Dr. Robert Greenwald, Chief of Rheumatology, Long Island Jewish (LIJ) Medical Center, New Hyde Park, NY 11042.** LIJ is the Long Island Campus for the Albert Einstein College of Medicine. An Equal Opportunity Employer.

### RESEARCH SCIENTIST

Saint Francis Hospital and Medical Center located in Hartford, Connecticut, is seeking candidates to join our NIH-supported bone biology laboratory to work on molecular and cellular biology of the bone. Candidates should have completed a doctorate degree and a post-doctorate fellowship with prior molecular and cell biology experience. Candidates will be eligible for an appointment at the University of Connecticut School of Medicine. Interested candidates should send a résumé and references to:

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**Dr. Cynthia Hemenway and  
Dr. Linda Hanley-Bowdoin  
Department of Biochemistry  
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Raleigh, NC 27695-7622**

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**RESEARCH INVESTIGATOR.** Sought to oversee molecular biology component of a small and friendly laboratory devoted to pharmacology research. Must have Ph.D. and at least 2 years of postdoctoral experience in molecular biology. Prior experience in pharmacology is not necessary. This is a 3-year commitment of salary, technician, supplies and no formal teaching. Interested candidates should send curriculum vitae to: **Clinical Research Center, Room A7119 University Hospital, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0108. The University of Michigan is an Equal Opportunity Employer.**

**RESEARCH ASSISTANT.** Department of Molecular Genetics, Biochemistry, and Microbiology, for mid-western state university. Conducts research, analysis and experimentation in genetic engineering using and designing oligonucleotides for the purpose of targeted insertion of defined mutations into cloned genes and subsequent introduction into recipient mammalian cells by DNA transfection methods; monitors gene expression of these mutations; original research experiments and sophisticated theoretical calculations must be developed; prepares technical reports and compiles research results for publication. Ph.D. in biochemistry or molecular biology required. Must have 2 years of experience in the job described or 2 years of experience in (i) use and design of oligonucleotides (DNA engineering); (ii) site-directed (targeted) mutagenesis; (iii) DNA cloning and sequencing; and (iv) analyzing DNA alternative structures. Experience must be evidenced by two publications involving DNA structures. Required experience may be gained before, during or after Ph.D. degree. Forty hours per week, 9 a.m. to 6 p.m., Monday to Friday; salary: \$24,403.60 per year. Must have proof of legal authority to work permanently in the United States. Send résumés in duplicate (no calls) to: **S. Holton, JO# 1099769, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

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Funding:	Deadline for Application:	Announcement of Recipients:
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Inquiries and requests for application details should be directed to:



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## POSITIONS OPEN

**SENIOR RESEARCH CHEMIST.** Basic research in synthetic organic chemistry; synthesis and development of new chemical compounds as therapeutic agents, e.g. cardiovascular, AIDS, and cancer. Devise, synthesize, purify, and determine structure of complex heterocyclic and/or heteroatom containing acyclic systems as templates for interaction with cellular structures and probes for mechanism of biological action. Design and develop new synthetic methods for ligands for ion channels. Requirements: Ph.D. in organic chemistry and 2 years of postdoctoral experience involving synthesis and mechanistic study of heteroatom containing natural products and evolving approaches to synthesis of compounds. Experience in discovery and development of pharmaceutical agents and all phases of separation science and physical methods for structure determinations such as NMR, IR, UV, and mass spectrometry. Experience involving designing and carrying out experiments in mechanism of biological agents with successful work in synthetic methodology and total synthesis of complex natural products and biologically active compounds. Outstanding academic and publication background with related computer software background. Forty hours per week; \$3960 per month; résumé or curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123, JO#4382669.

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Requirements: Demonstrated skills in conducting independent research in all aspects of carcinogen adduct-containing nucleic acid chemistry and biology. Knowledge of the latest techniques in molecular biology and recombinant DNA including site-directed mutagenesis (in vitro and in vivo), polynucleotide synthesis and structure, and related topics. Demonstrated communication skills and ability to interact effectively with scientists at a high level. Substantial publication record in above-mentioned research areas. Must have published in peer-reviewed journals and have established a national reputation. Demonstrated ability to develop independent research grant. Supervise two to three technical staff. Ph.D. in bioengineering or molecular biology required. Salary range: \$3200 to \$6500 per month. *Equal Opportunity Employer.* Send this ad and your résumé to: Job #LQ 6160, P.O. Box 9560, Sacramento, CA 95823-0560 no later than 8 June 1991.

**BIostatistician I.** For pharmaceutical research and development. Plan, coordinate, and generate statistical analyses and reports of data from human clinical trials of experimental compounds. Ensure that analyses of research studies are consistent with stated objectives and current statistical practice. Participate in selection of correct statistical methodology and strategy (including specifications for nre software, report format, etc.), coordinate and perform data analyses. Report results in a manner understandable to research scientists, FDA, other regulatory agencies, and to the nonscientist. Interact during analysis and report stage with clinical monitors, CRAs, and data processing and data compliance personnel. Applicant must have Ph.D. degree in statistics/biostatistics and no experience or a master's degree in statistics/biostatistics and 3 years of experience. Fluency in oral and written English; knowledge of data analysis on IBM systems and statistical packages such as SAS, BMDP, and SPSSX; proficient in use of general linear hypothesis and nonparametric procedures; and theoretical background in design of experiments involving clinical trials. Hours are 8:00 a.m. to 5:00 p.m., Monday to Friday; salary: \$44,000 per year. Job site/interview: Palo Alto, California. Send this ad and your résumé stating your qualifications to: Job No. BM 10066, P.O. Box 9560, Sacramento, CA 95823-0560 not later than 8 June 1991.

## POSITIONS OPEN

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**CLIMATE CHANGE ANALYST.** Conduct climate change analysis, climate sensitivity modeling, sea level rise projections modeling, and global carbon cycle modeling, using knowledge of oceanography, energy and geophysical sciences, and experience with climate/oceanic modeling, numerical and mathematical modeling for global warming studies, Fortran, Pascal, NCAR Graphics and Mathematica. Draft position papers on global warming and scientific controversies due to anthropogenic greenhouse gas emissions using experience in computerized atmospheric modeling. Forty hours per week, 9 a.m. to 5 p.m.; salary: \$36,000 per year. Requirements: Ph.D. (A.B.D. acceptable) in applied science and 2 years of experience in job offered or as research assistant with experience in climate change studies. Mail two résumés with copy of ad and JO #9424 to DOES, 500 C Street, N.W., Room 325, Washington, DC 20001. Telephone: 202-724-3770. *Proof of legal right to work in the United States must be provided.*

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## MEETINGS

### INTERNATIONAL CONFERENCE AND SUMMER SCHOOL ON THE THEORY AND CONTROL OF DYNAMICAL SYSTEMS: APPLICATIONS TO NEURAL NETWORKS AND IMMUNOLOGY

At Novum Research Park, Stockholm, Sweden; 4 to 10 August 1991.

Invited speakers: Shui-Nee Chow (Atlanta, Georgia), Manfred Eigen (Göttingen), Robert Gardner (Chapel Hill, North Carolina), Morris Hirsch (Berkeley, California), Alberto Isidori (Rome), Lennart Ljung (Linköping, Sweden), Göran Möller (Stockholm), Alan S. Perelson (Los Alamos, New Mexico).

Inquiries: Stig I. Andersson, Chalmers Science Park, S-412 88 Göteborg, Sweden. FAX: +46-31-724240. Telephone: +46-31-724284.

### SECOND INTERNATIONAL CONFERENCE ON HUMAN ANTIBODIES AND HYBRIDOMAS

24 TO 26 MARCH 1992

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Contact: Susan L. Patterson, Butterworth-Heinemann, 80 Montvale Avenue, Stoneham, MA 02180. Telephone: 617-438-8464, ext. 234 or 303.

## POSITIONS OPEN

**ASSISTANT INVESTIGATOR.** To join a group investigating the molecular biology of Kell and Kx blood group antigens. Applicants must have a Ph.D. or M.D., with extensive knowledge of molecular biology and biochemistry. Expertise required in DNA cloning, sequencing, PCR, vector construction and isolation of proteins. Applicants with 2 to 3 years of postdoctoral experience preferred. Send curriculum vitae and names of three references to: Colvin Redman, Ph.D., Lindsley F. Kimball Research Institute, New York Blood Center, 310 East 67th Street, New York, NY 10021. *Equal Opportunity Employer, M/F/H/V.*

**SENIOR RESEARCH BIOCHEMIST (CELL BIOLOGIST).** Ph.D. with at least 4 years of postdoctoral experience and a strong background in biochemistry/cell biology/immunology to conduct immunology research in the cancer research department. Specific areas of expertise required are cell culture, microscopy, intracellular protein trafficking, subcellular fractionation, protein purification, and molecular biology. Duties for this research position include: (1) designing, constructing, producing, and purifying recombinant proteins as potential vaccines; (2) evaluating intracellular protein compartmentalization; (3) providing cellular/molecular biology support for a multidisciplinary group of scientists; and (4) supervising technical support staff. Potential candidates must have significant experience with protein translocation across endoplasmic reticulum membranes and transport of proteins to the Golgi complex and cell surface. Forty hours per week; \$4000 per month. Send résumés or curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123, J# 4382675, together with proof of lawful authority to be employed in the United States.

## ANNOUNCEMENTS

### FUNDS AVAILABLE FOR RESEARCH IN PEDIATRIC NEURAL TUMORS

Ronald McDonald Children's Charities (RMCC) invites applications from interested investigators for research proposals relating to neural tumors in children. The intent is to foster multidisciplinary, interrelated research within institutions similar to a program project. Applicant organizations should be located within the United States or Canada. For further information contact: RMCC, McDonald Plaza, Oak Brook, IL 60521, Attention: Medical Advisory Committee.

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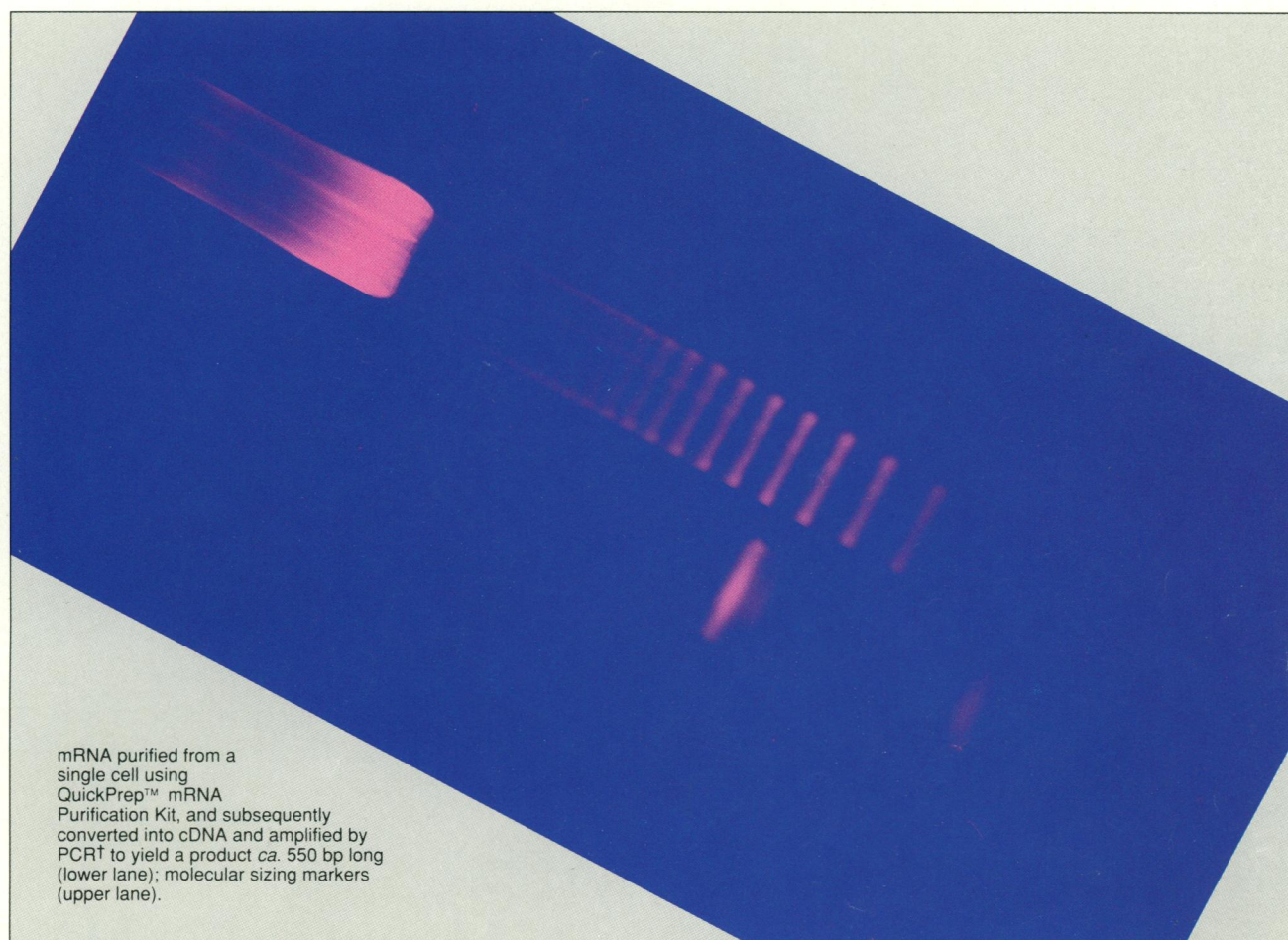
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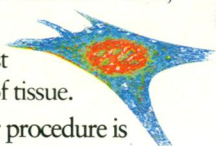
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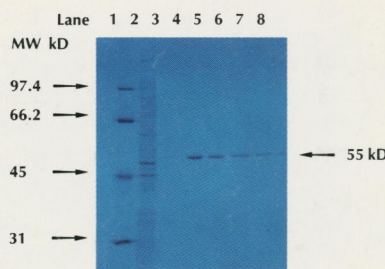
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The novel 8-amino-acid FLAG marker peptide is fused with virtually any protein for expression and secretion by the pFLAG-1 vector. The FLAG fusion protein is rapidly purified with the Anti-FLAG™ M1 affinity column. After that, the FLAG marker is easily removed with Enterokinase, and detected at any time with the Anti-FLAG™ M1 monoclonal antibody. With FLAG, you also get:

**A Universal Marker** for fast and efficient purification of any protein fused to the FLAG peptide.

**High Yield** due to the efficient expression and secretion of FLAG fusion proteins by the pFLAG-1 expression vector, and the fact that the small FLAG peptide does not affect biological activity.

**Rapid Purification** of a biologically active protein



**Single-Step Purification:** Lanes 2 and 3 show contaminating proteins eluted using CaCl<sub>2</sub> buffer, lanes 4-8 show the recovery of the 55 kD FLAG-BAP\* fusion protein by washing with a mild buffer containing EDTA.

from a crude cell lysate in minutes with the anti-FLAG M1 affinity gel.

**Recovery of Biologically Active Proteins** as a result of mild conditions during affinity purification.

**Efficient Detection** because the FLAG peptide occurs on the protein surface for easy detection with the Anti-FLAG M1 monoclonal antibody.

**Get Everything You Need to Flag a Protein Down.** Order your complete FLAG Biosystem today (Cat. No. IB 13000) from

your VWR rep, or call IBI toll-free for a detailed six-page technical brochure: **1-800-243-2555**.

**Kit includes:** pFLAG-1 expression vector, Anti-FLAG M1 monoclonal antibody, Anti-FLAG M1 affinity gel, enterokinase, enterokinase buffer, pFLAG-1-BAP\* control vector, chromatography column, and technical manual.

\*Bacterial Alkaline Phosphatase



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