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NEW AMES II—MORE SENSITIVE, MORE SPECIFIC, MORE QUANTITATIVE THAN THE ORIGINAL AMES ASSAY

Ames II, a new version of the Ames Assay, has been developed to identify base-pair substitution mutations upon detection of mutagens. Ames II comes in a 96-well microtiter format for easy manipulation.

Six *Salmonella typhimurium* strains have been constructed, each of which carries a different missense mutation in the histidine operon that is designed for reversion via the base substitution unique to each strain.

Ames II lets you identify missense mutational spectra caused by mutagens without the need to sequence. Strains can be combined and used as a single mixture for rapid screening due to

STEP 1

- Grow cells overnight @ 37°C, 300 rpm
- The O.D. 600 nm should be > 2.0

STEP 2

- Transfer 0.1ml of cell suspension for dosing
- Incubate 90 min. @ 37°C @ 300 rpm

STEP 3

- Aliquot cells & dilute to determine viability

STEP 4

- Plate remaining cells for revertants
- Incubate @ 37°C/2 days

STEP 5

- Score reversion & cell viability plates
- Calculate survival and fold inductions

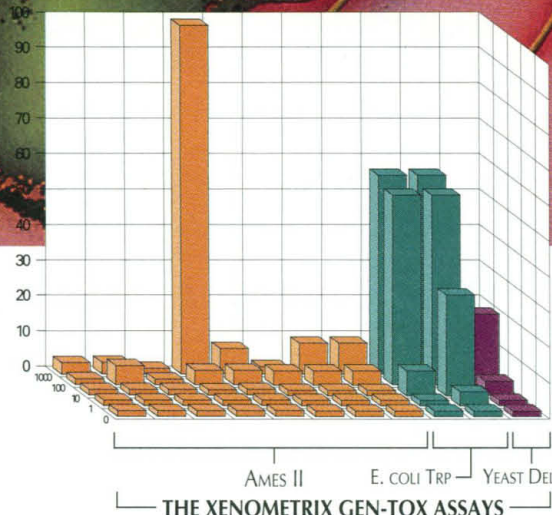
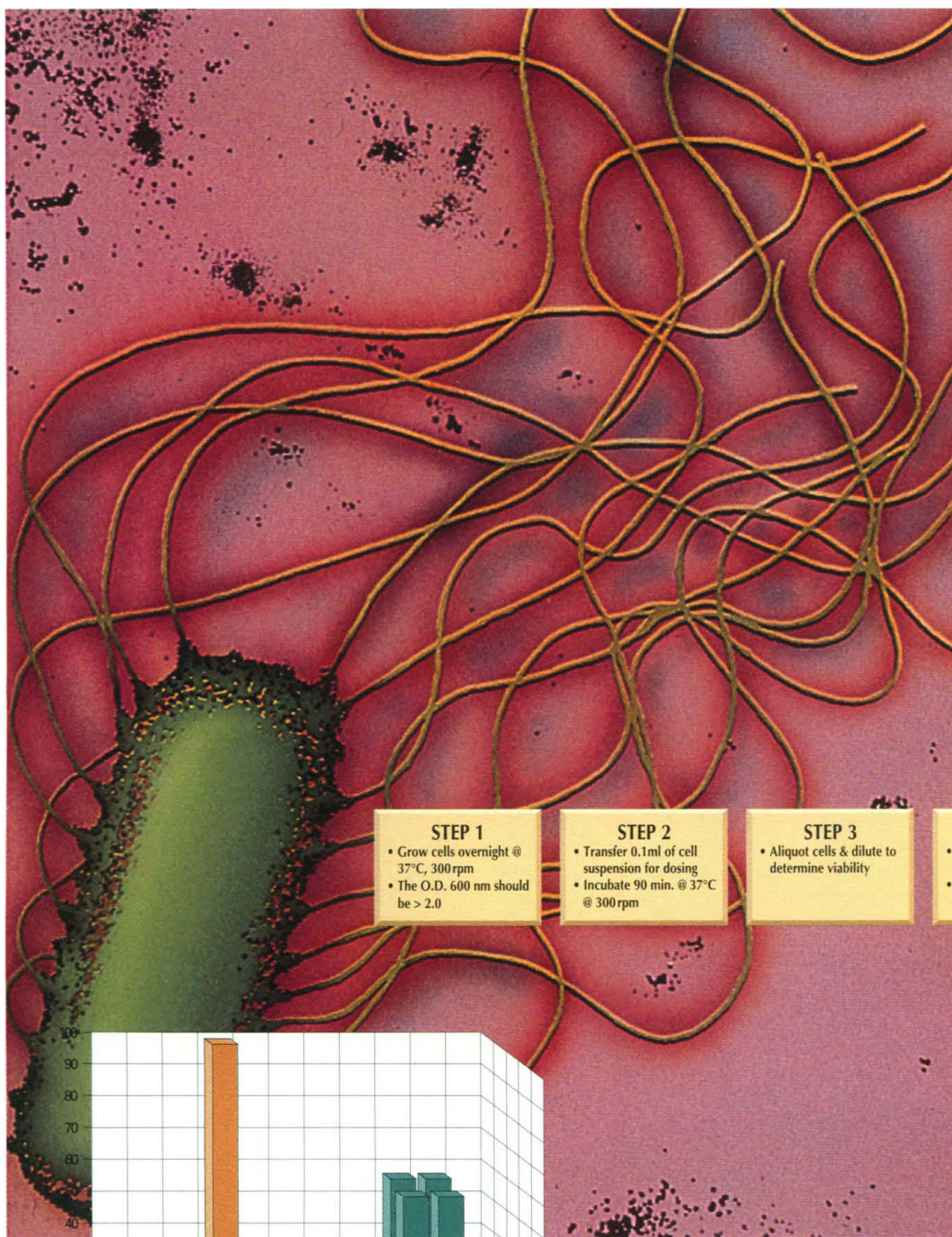
minimal complementation among the six strains. Low spontaneous reversion frequencies allow the detection of mutagens at lower concentrations without loss of sensitivity to a large range of doses. Simultaneous cell viability and reversion inductions are easily done.

For details, contact: Xenometrix, Inc.
2860 Wilderness Place • Boulder, CO
80301 USA • Fax: (303) 447-1758
Toll Free: 1-800-436-2869

The XenoMatrix™

The XenoMatrix™ integrates results from a variety of Xenometrix tests into a single database. It then produces a unique "fingerprint" for individual compounds, which graphically demonstrate different toxicological end points and provide internal confirmation from different tests that a compound is, or is not, problematic for a particular human cell or tissue.

* Developed by P. Gee, D.M. Maron and B.N. Ames, Proc Nat Acad Sci



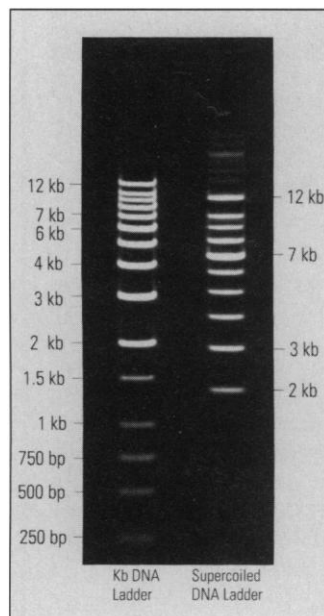
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Plasmid DNA Purification System

The NucleoSpin system makes use of specially treated membranes that can bind up to 20 µg of plasmid DNA. Each membrane comes in a micro spinning cup that can be placed in standard microcentrifuge tubes. The procedure can be completed in 20 min or less. The plasmid DNA is eluted in a low salt buffer and is ready for a variety of manipulations including restriction analysis, sequencing, amplification, or bacterial transformation. **The Nest Group. Circle 140.**

DNA Ladders

Three new DNA markers allow accurate sizing and quantitation of linear and supercoiled double-stranded DNA. The Kb DNA Ladder contains 15 linear fragments from 250 bp to 12 kb. The bands are produced in exact 1000-bp increments from 1 to 10 kb, with additional bands at 250 bp, 500 bp, 750 bp, 1500 bp, and



12 kb. This even spacing allows easier and more accurate sizing of DNA. The Illuminator Kb DNA ladder is a version of the Kb DNA Ladder with a fluorescent label for use with the Illuminator nonradioactive detection system. The

Supercoiled DNA Ladder produces bands from 2 to 10 kb at exact 1-kb increments, with an additional band at 12 kb. **Stratagene. Circle 141.**

Protein Stain

B/T Blv is a new protein stain designed to replace Coomassie Blue R-250. This staining agent has a higher affinity for proteins and a lower affinity for polyacrylamide. The result is that staining a 0.75-mm-thick, >7.5% polyacrylamide protein gel takes 20 min and destaining requires only a quick rinse or a 10-min wash. The affinity of this stain for proteins results in an approximately twofold increase in sensitivity over Coomassie with no loss in linearity. It does not rely on caustic chemicals and reduces the solvent waste produced by half. **B/T Scientific Technologies. Circle 142.**

Antibodies

Three families of antibodies can be used for epitope tagging for screening colonies, localization and purification of expressed proteins, and quantitation by immunoprecipitation. The three families are: polyclonal antibody HA.11, which recognizes an influenza hemagglutinin epitope; monoclonal antibodies (mAb) AU1 and AU5, which are specific for sequences of the bovine papilloma virus; and mAb 9E10, which is specific for a portion of the human c-myc gene product. **Berkeley Antibody. Circle 143.**

A line of mAbs with cancer research applications includes: Anti-EMA, Anti-Cathepsin D, and Anti-nm23-H1, tumor invasion and metastasis markers; Anti-Her-2/neu, oncoprotein;

Anti-p53, tumor suppressor protein; Anti-Vimentin, general tumor marker; Anti-EGFR, Anti-p120, and Anti-PCNA, growth and proliferation markers; and Anti-PR, hormone receptor. **Becton Dickinson Cellular Imaging Systems. Circle 144.**

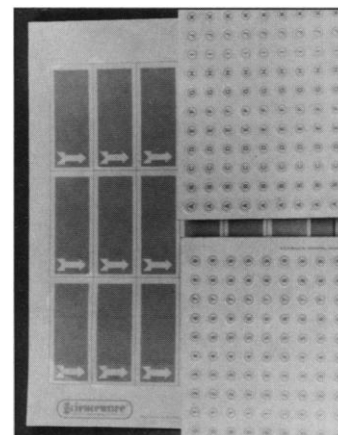
A rabbit polyclonal antibody to neurotrophin 3 can be used in immunohistochemistry and immunoblotting. The neurotrophins are a family of growth factors that act on a wide range of neurons. **Chemicon International. Circle 145.**

Photoactivatable Fluorescent Dyes

Photoactivatable or "caged" fluorescent dyes are colorless and nonfluorescent until photolyzed with near-ultraviolet light. Caged derivatives of fluorescein, rhodamine 110, carboxyrhodamine Q, and HPTS are available, as are reactive caged dyes and caged fluorescein conjugated to various molecular weight dextrans. Applications include the study of fluid dynamics, hydrodynamic properties of the cytoplasmic matrix, cell-cell communications, cell lineage, lateral diffusion in membranes, and protein structure and function. **Molecular Probes. Circle 146.**

X-ray Film Markers

Radiography Glo-Stickers are self-adhesive labels that mark x-ray film for alignment, identification, dating, name of researcher, and other pertinent information. The Glo-Stickers are applied to the substrate, a bright white light is shined on the sticker, and within 2 min an x-ray exposure is taken. The short



life-span of the glow has the advantage of leaving a distinct mark without overexposing the film as some products do. **Bel-Art Products. Circle 147.**

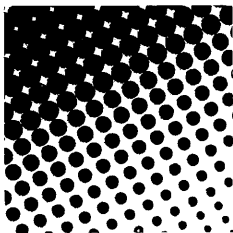
Literature

Cell Adhesion Molecules is a poster detailing the role of the major cell adhesion molecules in the inflammatory process. It follows the steps involved in the inflammatory adhesion mechanism from the generation of the initial inflammatory signals to the extravasation of the white blood cell into the surrounding tissue. **R&D Systems. 148.**

Field-Emission Scanning Electron Microscope DSM 982 Gemini provides a detailed explanation of the product's patented magnetic/electrostatic objective lens with outstanding imaging and resolution capabilities, especially at low beam energies. The unit's innovative beam technology advances image resolution to the 1-nm level. **Zeiss. Circle 149.**

Systems for Separation Solutions is a 24-page brochure on a complete line of systems including high-performance liquid chromatography (HPLC), capillary electrophoresis, microbore HPLC, and LC/mass spectrometry systems. The brochure highlights the manufacturer's strategy for today's multi-vendor, multi-instrument environment. **Perkin-Elmer. Circle 150.**

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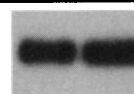
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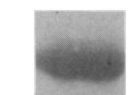
Northern blot of rat
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(rGH) mRNA (1 kb)



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rGH gene fragment
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(22 kD)



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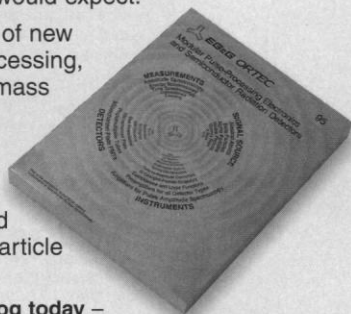
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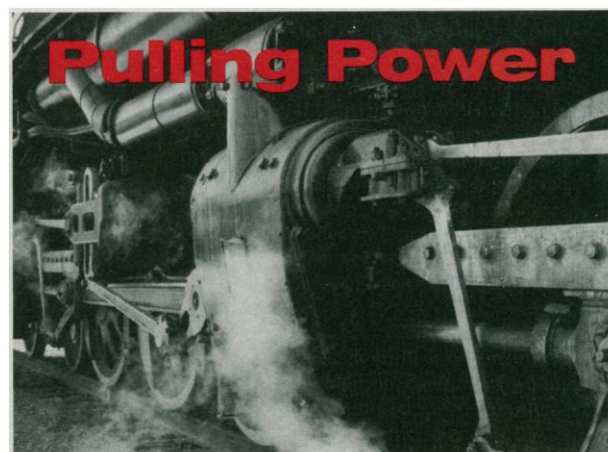
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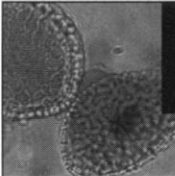


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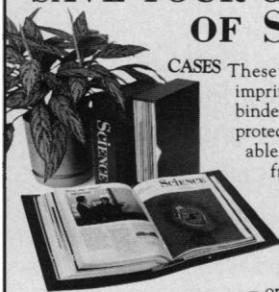
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Researchers are encouraged to submit data to whichever of the three databases is most convenient. The receiving database will transmit the data to the other two. Collectively, the databases will make the sequence information available to scientists throughout the world through computer networks, magnetic tapes, and CD-ROMs.

Many editorial policies require submission of sequence data and the issuance of an accession number by the databases as a condition of publication. (At the authors' option, sequence data may be kept confidential until publication.) But even when not required, the inclusion of an accession number in a publication helps users efficiently retrieve the sequence from the databases. To facilitate the submission process, free software for PC and Macintosh computers is available. For assistance with sequence submission, contact the most convenient database:

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University of Florida
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ECOLOGIST

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ASSISTANT PROFESSOR Applied Soil Biogeochemist

TENURE-TRACK, academic year position in the Department of Natural Resources Science beginning July 1, 1995. Position is approximately 60% teaching and 40% research. Teaching responsibilities include an undergraduate course on inorganic chemistry of soils and water, a course in field and laboratory methods for soil and water investigations, and a graduate course related to the fate of inorganic chemicals on the landscape. Successful applicant is required to demonstrate their effectiveness, through publications and grants, to develop a high-quality, fundable, graduate research program that focuses on the influence of land use and vegetated ecosystems on the fate of inorganic chemicals, with special attention to water quality issues.

Ph.D. in soil science, ecology, forestry, agricultural engineering, environmental science, or related field required. Minimum of one year of relevant postdoctoral experience required. Expertise in biogeochemical cycling, landscape-scale studies, and plant/soil/chemical interactions required. Experience with landscape-scale analytical techniques such as geostatistics preferred. Teaching experience preferred.

Submit a letter of application including a statement of research and teaching interests, curriculum vitae, official transcripts, and three letters of reference by April 15, 1995, to: **Arthur Gold, Search Committee Chair (Log No. 191130), University of Rhode Island, P.O. Box G, Kingston, RI 02881.** *The University of Rhode Island is an Affirmative Action/Equal Employment Opportunity Employer and is committed to increasing the diversity of its faculty, staff and students. People from underrepresented groups are encouraged to apply.*

ASSISTANT PROFESSOR INSECT SYSTEMATICS

Systematics/taxonomy: a 12-month, tenure-track position at the **ASSISTANT PROFESSOR** level is available in the Department of Entomology for an insect systematist with broad taxonomic skills and a primary interest in Biodiversity. Candidates employing molecular approaches to systematics and taxonomic research are encouraged to apply. The successful applicant will be expected to develop and teach courses in Insect Taxonomy and Principles of Systematics. Preference will be given to candidates with postdoctoral experience. Send curriculum vitae, statement of interests, and names; addresses and telephone numbers of at least three references by March 7, 1995, to: **Dr. Tim Casey, Department of Entomology, Cook College, Rutgers University, New Brunswick, NJ 08903. Rutgers is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF MICROBIOLOGY AND CELL SCIENCE UNIVERSITY OF FLORIDA

The Department of Microbiology and Cell Science, University of Florida, invites applications for a **TENURE-TRACK POSITION** available August 1, 1995. This position is equally divided between teaching and research. It includes start-up funds and a salaried technician. The successful candidate is expected to develop an externally funded research program in the area of microbial physiology, microbial ecology, or bioremediation. Teaching responsibilities will include participation in undergraduate and graduate courses, training of graduate students and other University-related activities. Candidates should have a Ph.D. in Microbiology, Biochemistry, or related science and at least two years of postdoctoral experience. The closing date for this position is March 1, 1995. Applicants should submit a curriculum vitae, summary of research interests, and the names of three referees to: **Lonnie O. Ingram, Department of Microbiology and Cell Science, Museum Road, P.O. Box 11700, University of Florida, Gainesville, FL 32611-0700.** The University of Florida is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

ASSISTANT/ASSOCIATE PROFESSOR

Tenure-track faculty position, Department of Pharmacology and Experimental Therapeutics, Loyola University Chicago, Stritch School of Medicine. The Department of Pharmacology and Experimental Therapeutics is seeking to fill a tenure-track **ASSISTANT PROFESSOR** or **ASSOCIATE PROFESSOR** position. The candidate should have a Ph.D. and/or M.D. degree, postdoctoral experience, and a strong commitment to excellence in research and teaching. Evidence of originality, scientific accomplishment, and the ability to develop a productive, independent research program, is essential. Salary is competitive, and based on experience and qualifications. Start-up support will be provided for early development. Candidates should send their curriculum vitae, three letters of recommendation, representative reprints, and a synopsis of their current and future research interests to: **Dr. Israel Hanin, Chairman, Department of Pharmacology and Experimental Therapeutics, Loyola University Chicago, Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153. Telephone: 708-216-3261; FAX: 708-216-6596.** An Affirmative Action/Equal Opportunity Employer.

EVOLUTIONARY ECOLOGIST MICROBIOLOGIST/IMMUNOLOGIST Carleton College

Applications are invited for two positions beginning September 1, 1995, at the rank of **VISITING ASSISTANT PROFESSOR** in the Department of Biology. A one year leave replacement (evolutionary ecologist)-teaching responsibilities include a lecture/lab course in ecology, a lecture course in evolution, a seminar in area of special interest, and participation in laboratory instruction for introductory courses. A one year position (microbiologist/immunologist)-teaching responsibilities include a lecture/lab course in microbiology, immunology, a seminar in area of special interest, and participation in laboratory instruction for introductory courses. Ph.D. required. Send application, curriculum vitae, undergraduate and graduate transcripts, a statement of teaching philosophy, a summary of research and three letters of reference to: **G. E. Wagenbach, Department of Biology, Carleton College, Northfield, MN 55057-4025** by March 1, 1995. Carleton College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR**, non-tenure-track. Candidate must be a Ph.D. with interest and some experience in research related to sleep disorders and ability to attract extramural support. Please send curriculum vitae and letter to: **Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR ENVIRONMENTAL MICROBIOLOGY

The Environmental Sciences Program, University of Massachusetts, Amherst, seeks an Environmental Microbiologist/Molecular Biologist to fill a nine-month tenure-track **ASSISTANT PROFESSOR** position involving 50% teaching and 50% research. Applicants should have a Ph.D. in microbiology, molecular biology or related environmental field, preferably with relevant postdoctoral experience, and a strong background in molecular biology. The successful applicant will be expected to develop a nationally recognized, externally funded research program. Teaching responsibilities will include an undergraduate course in environmental microbiology and bioremediation and a graduate course in molecular approaches to bioremediation. The candidate will be expected to interact with aligned programs such as Molecular and Cellular Biology, Biotechnology, and Microbiology. Application deadline is March 15, 1995; however, applications will be received until the position is filled. Candidates should send curriculum vitae, representative reprints, a synopsis of current and future research interests, teaching philosophy, and the names, addresses and telephone numbers of three references to: **Chair, Environmental Microbiology Search Committee, 111 Stockbridge Hall, University of Massachusetts, Amherst, MA 01003-7240.** The University of Massachusetts is an Affirmative Action/Equal Opportunity/Americans with Disabilities Act Employer.

ASSISTANT PROFESSOR MACROMOLECULAR CRYSTALLOGRAPHY Department of Biochemistry and Molecular Genetics University of Alabama at Birmingham (UAB)

Applications are invited for a **TENURE-TRACK POSITION**. UAB offers exceptional opportunities for collaborative research in macromolecular structure and rational drug design. The candidate will be expected to develop a vigorous independent research program and to participate in the teaching activities of the department's graduate program. He/she will hold secondary appointments in the Center for Macromolecular Crystallography and in the Comprehensive Cancer Center. Salary for this twelve-month appointment will be commensurate with the candidate's qualifications. Applicants should submit a curriculum vitae, a statement of research interests and future research plans, and a list of at least three references to: **Dr. Stephen C. Harvey, Chair, Search Committee, Department of Biochemistry and Molecular Genetics, Schools of Medicine and Dentistry, University of Alabama at Birmingham, Birmingham, AL 35294-0005.** UAB is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR VERTEBRATE BIOLOGY

The Department of Biological Sciences, Ohio University invites applications for a **TENURE-TRACK POSITION** in vertebrate biology effective September 1, 1995, contingent on final budget approval. Research area is open. We seek an individual qualified to teach comparative vertebrate anatomy, human anatomy, and develop a course in their area of specialization. Applicants must have postdoctoral training, demonstrated excellence in research, and a commitment to teaching both undergraduate and graduate students. The applicant is expected to maintain a strong and independent research program. Minimum salary is \$34,000 for the academic year. Application deadline: March 1, 1995. To apply send curriculum vitae, statements of research interests and teaching experience, copies of representative publications, and three letters of recommendation to: **JRW: Vertebrate Biology Search, Department of Biological Sciences, 107A Irvine Hall, Ohio University, Athens, OH 45701.**

Ohio University is an Equal Opportunity/Affirmative Action Employer.

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR**, non-tenure-track. Candidate must be a Ph.D. with fellowship training in neuroscience/neurobiology and research interest in mammalian circadian rhythms. Please send letter and curriculum vitae to: **Ava Plotnick, Department of Psychiatry, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

UNIVERSITY OF VIRGINIA Molecular Genetics and Cell Cycle

The Department of Microbiology and the Markey Center for Cell Signaling are seeking an outstanding scientist for appointment as **ASSOCIATE** or **FULL PROFESSOR**. Candidates are expected to have an internationally recognized research program in the molecular genetics of the cell cycle, peer-reviewed grant support and demonstrated excellence in teaching and scholarship. The University of Virginia offers an outstanding environment for research on cellular signaling as well as opportunities for graduate and postgraduate training. Applicants should submit a curriculum vitae, a concise statement of research interests and selected reprints. These materials and three letters of reference should be sent to: **Chair, Microbiology/Markey Search Committee, Box 441, Health Sciences Center, University of Virginia, Charlottesville, VA 22908.** Application materials should be received by March 1, 1995.

The University of Virginia is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority scientists.

ASSISTANT OR ASSOCIATE PROFESSOR BIOCHEMISTRY

The Department of Chemistry and Biochemistry invites applications from exceptional candidates, with a Ph.D. and postdoctoral experience, for a **TENURE-TRACK POSITION** starting September 1, 1995, or later. The successful candidate is expected to establish a nationally competitive, independent research program in a significant area of biochemistry or structural biology. Teaching at both undergraduate and graduate levels is expected. Applicants with a proven record of accomplishment will be considered at the advanced level. Review of applications will begin by February 15, 1995, and will continue until this position is filled. To be considered for this position please submit a curriculum vitae, statement of current and future research plans, and have three letters of reference sent to: **Professor Mahendra Jain, Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE 19716.**

The University of Delaware is an Equal Opportunity Employer which encourages applications from minority group members and women.

ASSOCIATE PROFESSORS MICROBIOLOGY

The Department of Microbiology and Immunology, SUNY College of Medicine, Syracuse, invites applications for two full-time, **TENURE-TRACK FACULTY** positions. We particularly seek candidates with strong, active research programs in molecular virology, cancer virology, or gene therapy. Salary, space and start-up funds are competitive with national levels. Teaching duties will be at the doctoral level, and support for graduate students is available. The Department is expanding and is committed to building new programs. Please send curriculum vitae, outline of research interests and names of three references to: **Edward J. Shillito, Ph.D., Chairman, Department of Microbiology and Immunology, SUNY College of Medicine, 750 East Adams Street, Syracuse, NY 13210. Telephone: 315-464-5453.** The SUNY Health Science Center at Syracuse is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. The Department of Pathology of the University of North Carolina at Chapel Hill seeks to appoint an Assistant Professor to carry out a research program in cellular and molecular pathology. This program should feature use of cultures of human cells in studies of the pathogenesis of human diseases. Particular areas of emphasis should include cell interactions, environmental cell toxicity, and cell aging and immortalization. Requirements include a Ph.D., M.D., or equivalent; appropriate postdoctoral training and a record of past publications in this field and current significant peer-reviewed national research funding in the areas of emphasis. Those interested should send curriculum vitae, names of four references, and brief descriptions of experience and future plans to: **Mrs. Nancy Nye, Department of Pathology, CB No. 7525, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7525.** An Equal Opportunity/Affirmative Action Employer. Members of minority groups and women are encouraged to identify themselves.

THE UNIVERSITY OF
CALIFORNIA, IRVINE
SCHOOL OF BIOLOGICAL SCIENCES

ANNOUNCES THE RE-OPENING OF FIVE
FACULTY POSITIONS WHICH WERE
ORIGINALLY ADVERTISED IN THE
NOVEMBER 4, 1994, ISSUE OF SCIENCE.

UCI's School of Biological Sciences has 70 full-time faculty doing innovative work in a broad range of research areas including cellular, developmental, evolutionary and molecular biology, biochemistry, ecology, and neurobiology. In conjunction with the basic science departments of the UCI College of Medicine, we operate several respected graduate programs. We currently have five positions available which will require selected candidates to develop and maintain an active research program, and to participate in both our undergraduate and graduate teaching programs. Curriculum vitae, a description of research and teaching backgrounds, and names and addresses of three references should be submitted by Feb. 17, 1995 to the appropriate Search Committee Chair.

**DEPARTMENT OF MOLECULAR
BIOLOGY AND BIOCHEMISTRY**

Assistant Professor - Tenure Track

The successful applicant will have broad training in immunology and research interest in the field of immunopathogenesis. Departmental research interests cover a wide range of topics in molecular biology, molecular genetics, biochemistry, immunology, structural biology and cellular biology. Additionally, we have strong interdepartmental research units in virology and cancer as well as an expanding program in molecular pathogenesis in conjunction with the College of Medicine. Send materials to: Dr. Anthony James, Department of Molecular Biology and Biochemistry, UCI, Irvine, CA 92717-3900.

DEPARTMENT OF PSYCHOBIOLOGY

Assistant Professors (2) - Tenure Track

Current departmental research emphasizes plasticity with a focus on problems within the areas of learning and memory, integrative neuroscience and aging/neurodegeneration. The successful candidates will be neurobiologists working at the molecular, cellular, systems or behavioral levels. We anticipate that candidates' research will complement current Departmental research programs and have a manifest relationship to some behavioral endpoint. Send materials to: Dr. H.P. Killackey, Department of Psychobiology, UCI, Irvine, CA 92717-4550.

**DEPARTMENT OF DEVELOPMENTAL
AND CELL BIOLOGY**

Assistant Professor - Tenure Track

The successful candidate will be using innovative approaches, preferably molecular and genetic, to investigate fundamental problems in the development of animals or plants. Research interests in the Department include the molecular genetics and cell biology of pattern formation, growth control and cell signaling in animals and plants, as well as development of the nervous system. Send materials to: Dr. Susan V. Bryant, Department of Developmental and Cell Biology, UCI, Irvine, CA 92717-2300.

**SCHOOL OF BIOLOGICAL SCIENCES -
STRUCTURAL BIOLOGIST**

Assistant/Associate Professor - Tenure Track

The successful candidate will have a background in the area of macromolecular crystallography, NMR spectroscopy or computational/theoretical approaches to fundamental biological problems. Facilities at UCI include high field NMR, spectrometers, state-of-the-art x-ray diffraction equipment, and excellent computing facilities including access to the UCSD Super Computing Center. Send materials to: Dr. Thomas Poulos, Department of Molecular Biology and Biochemistry, UCI, Irvine, CA 92717-3900.

The University of California, Irvine, is committed to diversity and encourages applications from women and minorities.



**Chair,
Department of Bioengineering**

Recommendations and applications are invited for the Chair of the Department of Bioengineering in the School of Engineering and Applied Science at the University of Pennsylvania. Applicants should be internationally recognized scholars with demonstrable leadership skills. Educational programs, including undergraduate and graduate, and collaborative research programs involve the Schools of Medicine, Dental Medicine, Veterinary Medicine, Arts and Sciences, and Wharton and all Engineering disciplines. The University is simultaneously searching for the Chair of the Department of Bioengineering and a Director of a new Institute for Medicine and Engineering. It is expected that these individuals will work closely together.

The University of Pennsylvania is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply. CV and appropriate supporting materials should be sent to:



Dr. John L. Bassani
Chair, Search Committee
Gabel Professor of Mechanical Engineering
School of Engineering and Applied Science
University of Pennsylvania
Philadelphia, PA 19104-6315

RPI, a leader in the development of ribozyme-based pharmaceutical and agricultural products, has established a multi-disciplinary team of creative scientists in a new facility in Boulder, Colorado. We are seeking qualified applicants to join our efforts to develop ribozymes as novel therapeutics. Our proprietary technology provides the exciting opportunity to explore the identification and delivery of small, catalytically active RNA molecules exogenously and express ribozymes from gene therapy vectors for the treatment of human disease. Three positions are available immediately:

Ph.D. Scientist with 2+ years' postdoctoral experience to join the Vector Biology group to develop adenoviral vectors for delivery of ribozymes. The preferred candidate will have expertise relating to the design, construction and production of adenovirus and/or adeno-associated virus vectors. Please submit materials to Dr. Larry Couture, Senior Scientist, Vector Biology.

Ph.D. Scientist with 2+ years' postdoctoral experience to join the Cell Biology group and to develop methods of introducing ribozymes into CD34+ hematopoietic stem cells. The preferred candidate will have expertise relating to the selection, propagation and differentiation of hematopoietic stem cells. Please submit materials to Dr. Dan T. Stinchcomb, Director, Biology Research.

Ph.D. or D.V.M Scientist with 2+ years' postdoctoral experience to join the Pharmacology group to develop *in vivo* assays of ribozyme function. The preferred candidate will have expertise relating to small animal models of cardiovascular disease, transplantation, or autoimmune disease and experience with *in vitro* cell-based assays. Please submit materials to Dr. Dan T. Stinchcomb, Director, Biology Research.

We offer a competitive salary and benefits package, including a stock option plan. For consideration, please send a *Curriculum Vitae*, the names of three references and indicate your position of interest, to: Ribozyme Pharmaceuticals, Inc., 2950 Wilderness Place, Boulder, CO 80301. FAX: (303) 449-6995. No phone calls, please. We are an equal opportunity employer.



**RIBOZYME
PHARMACEUTICALS,
INCORPORATED**

POSITIONS OPEN

MOLECULAR MECHANISMS OF CELL SIGNALING

The Anesthesiology Basic Research Unit wishes to fill a tenure-track position for a basic scientist at the **ASSISTANT PROFESSOR** level. The successful candidate will be expected to develop an independent research program focused on the molecular basis of signaling mechanisms in the nervous system. We are particularly interested in candidates with interests in pain and/or long-term changes in neuronal excitability. Generous start-up funds and space will be provided. The Unit (**Doctors Boyle, Crowder, Evers, Gautam, Hotchkiss, Lingle and Steinbach**) provides a unique research environment with interests in the molecular biology of G-proteins, structure and function of ion channels, molecular targets of anesthetics, and cellular physiology of excitable cells. Faculty members have joint appointments in a basic science department and are part of the strong graduate training program at Washington University. Candidates must have a Ph.D. and/or M.D. degrees with appropriate postdoctoral experience. The application deadline is March 15, 1995. Interested individuals should submit a curriculum vitae, a statement of research plans, and names of three referees to:

Search Committee
Anesthesiology Research Unit
Washington University School of Medicine
Box 8054
St. Louis, MO 63110

Environmental Science Educator: Full-time, tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level in an appropriate science department of the College of Arts and Science with affiliate status in the School of Education and Allied Professions. Teaching responsibilities would include science education and science courses. Doctorate in an appropriate scientific discipline or science education required. Preference will be given to an individual with a record of scholarship in science education or discipline-specific science education. Active scholarship in these areas is expected. The successful individual will promote significant interdepartmental and interdivisional interaction/collaboration related to environmental education. Interested persons should submit a curriculum vitae, transcripts, statements of teaching and scholarship goals, and arrange for three letters of recommendation to be sent to: **Richard E. Lee, Jr., Department of Zoology, Miami University, Oxford, OH 45056**. Review of applications will begin on March 1, 1995. *Miami University offers Equal Opportunity for Employment and Education.*

CELLULAR/MOLECULAR BIOLOGY FACULTY

The Department of Biology invites applications for a **TENURE-TRACK**, full-time undergraduate teaching position with normal faculty duties; research is encouraged.

Qualifications: Applicants should have a Ph.D. or equivalent in Biological Science with substantial emphasis in modern cellular/molecular biology. Interest and excellence in undergraduate teaching and advisement, ability to lead students in undergraduate research and to write grant proposals, and willingness to initiate an excellent cellular component as supportive to an organismal undergraduate program.

Complete applications consist of a letter of application addressing the above qualifications, curriculum vitae, unofficial transcripts and three letters of reference. Only complete applications received prior to application deadline will be considered. Application materials should be sent to: **Cell Search, Office of Employee Relations, Lake Superior State University, Administrative Building, Sault Ste. Marie, MI 49783** or **FAXED to: 906-635-2111**. Inquiries to **Karel Rogers: 906-635-2267** or **krogers@lakers.lsu.edu**. Application deadline: February 20, 1995. *An Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

SABA UNIVERSITY SCHOOL OF MEDICINE

Immediate opening: Two **FACULTY POSITIONS** for retired or semi-retired M.D.'s to teach in the areas of Clinical Medicine and Pathology. Immediate, permanent, openings with salary range \$24,000 to \$30,000, tax-free. Saba is a peaceful, crime-free, Dutch Caribbean island near St. Maarten. For more information call or write: **Dr. David Fredrick, 2421 West Pratt Boulevard, Suite 444, Chicago, IL 60645**. Telephone: 803-278-5544.

POSITIONS OPEN

Southwestern University

AT GEORGETOWN, TEXAS

Southwestern University seeks a broadly trained geneticist to occupy a one-year, **NON-TENURE-TRACK POSITION** involving the teaching of introductory genetics and other biology courses in a liberal arts setting. Although promise of excellence in teaching is considered to be more important than area of specialization, some background in botany is preferred and an earned doctorate is required.

Southwestern University is a selective, undergraduate institution committed to broad-based liberal arts and sciences education. Affiliated with the United Methodist Church, it has over 1,200 students and a history of stable enrollment. Southwestern's endowment of more than \$150 million ranks among the highest per student of undergraduate institutions in the country. The University is located in Georgetown, Texas, 28 miles north of Austin.

Send a letter of application, résumé, description of teaching and other professional goals, and the names, addresses and telephone numbers of three references to: **Biology Search Committee, Southwestern University, P.O. Box 770, Georgetown, TX 78627**. Deadline is March 17, 1995.

ASSISTANT PROFESSOR OF BIOLOGY

TENURE-TRACK POSITION beginning August 1995. Applicants must have a Ph.D. and teaching experience at the undergraduate level. Responsibilities include teaching General Biology, upper-level classes in ecology for majors and environmental science for non-majors. The individual will be expected to maintain a modest research program and direct undergraduate research. Send curriculum vitae and names and addresses of three references by 24 February 1995 to: **Dr. Beatrice Robinson, Department of Biology, Le Moyne College, Syracuse, NY 13214**. *Le Moyne College is a nationally recognized liberal arts institution in the Jesuit tradition and is an Affirmative Action/Equal Opportunity Employer.*

Indiana University School of Medicine, Terre Haute Center for Medical Education, invites applications for an **ASSISTANT/ASSOCIATE PROFESSOR** of Anatomy (tenure-track). Applicants should have earned doctorate in anatomy or related area, postdoctoral experience and potential to develop a productive/fundable research program. Special consideration will be given to broadly trained anatomists working in the area of psychoneuro-immunology. The individual is expected to teach medical histology to medical and graduate students. The expected starting date will be July 1, 1995. Applicants should send description of interests, curriculum vitae, and three references to: **Dr. William J. Anderson, Chair, Search and Screen Committee, THCME, Indiana University School of Medicine, 135 Holmstedt Hall, Terre Haute, IN 47809**. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSORS Neuroscientist/Neuropharmacologist

Applications are invited for two **TENURE-TRACK POSITIONS** in the Department of Cell and Neurobiology at the University of Southern California School of Medicine. Applicants should have a Ph.D. and/or M.D. degree with at least three years of postdoctoral experience. Academic rank is to be commensurate with qualifications and experience. The successful candidate will be expected to establish a vigorous, externally funded research program in the area of molecular or cellular biology of the retina and/or circadian rhythm and participate in medical school and graduate education in neuroscience, anatomy or pharmacology.

Applicants should send an introductory letter; names, addresses and telephone numbers of three references; and copies of most significant recent publications by March 1, 1995, to: **Dr. Cheryl M. Craft, Chair, Department of Cell and Neurobiology, University of Southern California School of Medicine, 1333 San Pablo Street, BMT401, Los Angeles, CA 90033**. *USC is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PHYSIOLOGIST/MOLECULAR BIOLOGIST

The Department of Physiology, Queen's University wishes to recruit a **FACULTY** member who uses molecular biological techniques to answer physiological research questions. Since the Department's areas of strength are in Cardiovascular/Respiratory, Endocrine, Gastrointestinal and Neurophysiology, preference will be given to applicants with interests in those areas.

The successful applicant will be required to establish an independent, externally funded research program, and to contribute to the teaching duties of the Department, though protected time will be provided in the initial years to allow the establishment of the research program. This is a Special Appointment, contingent upon the successful applicant acquiring salary support from an external agency.

Applications, including curriculum vitae, names of three references and a statement of research goals, should be submitted by March 15, 1995, to:

Dr. Mark A. Bisby
Department of Physiology
Queen's University
Botterell Hall, Room 442
Kingston, Ontario, Canada
K7L 3N6

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Queen's University has an employment equity program, welcomes diversity in the workplace and encourages applications from all qualified candidates, including women, aboriginal peoples, people with disabilities and visible minorities.

GENETICS OF LIPOPROTEIN METABOLISM

The Southwest Foundation for Biomedical Research (SFBR) invites applications for a **FACULTY-LEVEL POSITION** in the Department of Genetics to develop a new laboratory for genetic studies of lipoprotein metabolism. The successful candidate will be expected to develop a strong independent research program and will have opportunities to collaborate in ongoing research using human subjects and our unique pedigreed colonies of 3,000 non-human primates and 1,200 marsupials. Major projects in the Department of Genetics focus on genetic causes of common diseases, including atherosclerosis, diabetes, hypertension, obesity, and osteoporosis. Preference will be given to candidates interested in metabolic studies of lipoproteins using our pedigreed primates, but candidates from other research areas pertinent to lipoproteins and atherosclerosis will also be considered. This is an excellent opportunity for a creative scientist in an expanding genetics department. Affiliation with academic institutions also may be possible. Salary and rank will be commensurate with experience. Candidates must have a doctoral degree in the biological sciences and two years of postdoctoral experience. Please mail curriculum vitae, statement of research interests, and names, addresses and telephone numbers of three references to: **Director of Human Resources (444), SFBR, P.O. Box 28147, San Antonio, TX 78228-0147**. *An Equal Opportunity Employer.*

FACULTY POSITION-IMMUNOLOGY

The University of Maryland Cancer Center and the Department of Microbiology and Immunology, University of Maryland School of Medicine invite applications for a **TENURE-TRACK FACULTY** position at a level commensurate with experience for our joint research program in immunology. Applicants must have a Ph.D. and/or M.D. degree, extensive research experience in molecular or cellular biology of immune and/or hematopoietic systems, and a strong record of research accomplishments with sustained extramural funding. Successful candidates will be expected to lead independent research programs, to participate in the development of collaborative program projects, and to contribute to teaching of medical and graduate students.

Applicants should submit their curriculum vitae, an outline of current and future research interests, selected reprints, and names of three references to the following address: **K. M. Abraham, Ph.D., Chair, Immunology Search Committee, Department of Microbiology and Immunology, University of Maryland School of Medicine, 655 West Baltimore Street, Bressler Research Building 13-007, Baltimore, MD 21201**.

The University of Maryland at Baltimore is an Equal Employment Opportunity/Affirmative Action/ADA Employer. Minorities and women are encouraged to apply.



College of Medicine Postdoctoral Research Opportunities

Autoimmune Endocrinopathies

Noel Maclaren, M.D.- Applicant must have Ph.D. in immunology or related field, or M.D. with strong interest in autoimmune endocrinopathies. (Box 100275)

Gene Therapy

William Hauswirth, Ph.D.- Candidate must have research interest in ocular gene therapy using viral vectors. Experience in molecular cloning preferred. (Box 100266)

Mammalian Genetics

Richard Condit, Ph.D.- Molecular virology and transcription research opportunity anticipated to be available in Fall 1995. (Box 100266) **Richard W. Moyer, Ph.D.-** Seeking individual with interest in molecular virology, viral pathogenesis, and designing viral vectors to ameliorate inflammatory and other host responses. Applicant must have expertise in molecular biology, genetics, or virology. (Box 100266)

Membrane Transport

The Interdisciplinary Faculty for Membrane Biology invite applications from qualified individuals for postdoctoral training in the general area of membrane transport. From the eighteen members of this dynamic group, opportunities exist with the following faculty at the present time: 1) **Mike Kilberg, Ph.D.** (Amino acid transport and disease) (Box 100245); 2) **Brian Cain, Ph.D.** (Proton pump ATPases) (Box 100245); 3) **Susan C. Frost, Ph.D.** (Nutrient control of glucose transport); (Box 100245) 4) **Edward Block, M.D.** (Endothelial arginine transport); (Box VA Research 151) 5) **Kevin Anderson, Ph.D.** (Glutamate transport in brain); (Box 100144) and 6) **Charles S. Wingo, M.D.-** Seeking interested applicants for studies focusing on the identification of the genes and gene products responsible for H,K-ATPase activity in kidney, their regulation by acid-base and potassium balance, and adrenocorticoid hormones. (Box 100224) Preference will be given to those applicants who have background in cell and molecular biology.

Metabolic Chemistry

Peter Stacpoole, M.D., Ph.D.- Applicant must have research interest in drug metabolism and stable isotope kinetics in humans, animals and subcellular systems. Must be proficient in GC-MS, and knowledge of NMR spectroscopy and HPLC is desirable. (Box 100226)

Molecular Neuropsychopharmacology

Robert H. Lenox, M.D.- Applicants should have a strong background in molecular biology. Research interests and experience in molecular neurobiology, cytoskeletal remodeling and gene expression are highly desirable. (Box 100256)

Molecular Pathogenesis of HIV-1

Maureen M. Goodenow, Ph.D.- Position requires training in cell biology and molecular biology. Candidates must have research interest in virologic factors involved in pediatric

HIV-1 disease, and events that occur early in HIV-1 infection. (Box 100275)

Neurobiology of Alcohol Abuse

Marieta B. Heaton, Ph.D., Don W. Walker, Ph.D.- Positions are available for individuals who are interested in investigating the mechanisms of alcohol neurotoxicity. Applicants should have expertise in molecular biological methods to study the effect of alcohol on gene expression and signal transduction. (Box 100244)

Neuronal Cytoskeleton

Gudrun S. Bennett, Ph.D.- Position available in the area of neurofilament kinases for an individual with experience in molecular/cell biology, and/or protein chemistry. (Box 100235)

Neuropharmacology

William R. Kem, Ph.D.- Seek to hire a recent Ph.D. scientist with experience in patch-clamp analysis of single voltage-gated ion channels expressed in *Xenopus* oocyte and cultured cell membranes. (Box 100267)

Neuroscience

Peter W. Stacpoole, M.D., Ph.D.- Applicant must be proficient in cell culture and molecular biological techniques, and have research interest in mammalian nuclear and mitochondrial gene regulation in brain. (Box 100226)

Oncology

Tiliang Deng, Ph.D.- Seek individual with interest in the area of regulation of jun and fos transcriptional and oncogenic activities by extracellular signals. (Box 100245)

Signal Transduction

Philip Scarpace, Ph.D.- Candidates must have interest in research that involves regulation of the gene expression of adenylyl cyclase in the aging rat myocardium. (Box 100267)

Spectroscopy

Katherine N. Scott, Ph.D.- 1) Position available to join an active program in water suppressed H-1 NMR monitoring of therapy response of musculoskeletal tumor patients. 2) We have ongoing active programs in P-31 NMR spectroscopy monitoring of vascular disease and chronic heart failure patients. Interested applicants must have NMR specialization and experience with *in vivo* spectroscopy and/or imaging. Familiarity with a GE Signa imager would be highly desirable. (Box 100374)

TO APPLY:

For additional information and specified requirements for any of the above opportunities please write: University of Florida, College of Medicine, (indicate appropriate Box # for position of interest), Health Science Center, Gainesville, FL 32610. The University of Florida is an Affirmative Action-Equal Opportunity Employer, and applications from minorities and women are strongly encouraged.

POSITIONS OPEN

UNIVERSITY OF WASHINGTON Executive Director of Technology Transfer and Corporate Outreach

The University of Washington (UW) is seeking a senior-level executive to lead its technology transfer and corporate outreach programs. High energy, an entrepreneurial orientation, and the ability to work well with faculty and corporate representatives are required characteristics. The **EXECUTIVE DIRECTOR** will guide structural and functional coordination of the University's Office of Technology Transfer (OTT) with the Washington Research Foundation (WRF), a separate non-profit corporation that assists the UW in commercializing UW technologies. This will include defining and implementing a long-range plan to deploy the joint resources of OTT and WRF to build a vital and comprehensive intellectual property management program. High priority will be given to expanding OTT/WRF capability for starting and growing new companies based on emerging UW technologies, and to developing innovative research collaborations and funding arrangements with industry. Qualifications include: a balanced commitment to academic values and entrepreneurial zeal; demonstrated vision and ability to conceive and effectively pursue new initiatives; extensive experience with technology licensing and U.S. and foreign patent laws and procedures; and, a reputation as a consensus-builder. An advanced degree in a scientific discipline, and relevant experience in both a research university and industry are preferred.

Send résumé and letter of application to: **Search Committee for Executive Director, University of Washington, Office of Research, AC-20, WA 98195.** Salary will be commensurate with qualifications.

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

MUHLBERG COLLEGE BIOLOGY DEPARTMENT HEAD

Muhlenberg College seeks candidates for the tenure-eligible position of **PROFESSOR and DEPARTMENT HEAD**. Rank and salary commensurate with qualifications and experience. Requires a Ph.D. in biology, a demonstrated commitment to excellence in teaching consistent with the traditions of a liberal arts education and a distinguished record of scholarship. Preferred area of expertise is cellular biology with interest in neurobiology. Leadership in curricular development in the biological sciences, the ability to nurture faculty development and research programs, and administrative abilities desired.

Muhlenberg College is a church-related liberal arts college located one hour north of Philadelphia. Apply by sending your curriculum vitae, a statement of your academic and administrative philosophy, and three reference letters to: **Dr. Carl Oplinger, Biology Department, Muhlenberg College, 2400 Chew Street, Allentown, PA 18104-5586.** Application review begins March 1, 1995. *An Equal Opportunity Employer, we encourage applications from minority and women candidates.*

TENURE-TRACK FACULTY POSITION. The Division of Neurobiology at the Barrow Neurological Institute is seeking a faculty person with a demonstrated research focus in motor or visuomotor research. The capacity to develop and maintain a grant-supported research program and to participate in collaborative research programs within the Division is critical. A minimum of two years of postdoctoral experience is required. Early and mid-career individuals are urged to apply. The position is available beginning January 1995. The search process will remain open until the candidate is selected. Applicants should contact: **James R. Bloedel, Chairman, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ. Telephone: 602-406-3487.** *Equal Opportunity Employer.*

Department of Psychiatry, University of Pennsylvania, has two **FACULTY POSITIONS** available for program in neurobiology and behavior. Positions are at either the junior or senior level depending on candidates' qualifications. Candidates must be M.D., Ph.D. with training in genetics and experience in endocrinology, molecular pharmacology and neuroanatomy. Please send letter of intent and curriculum vitae to: **Peter C. Whybrow, M.D., Chairman, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN



DEAN COLLEGE OF ENGINEERING The University of Michigan Ann Arbor

The University of Michigan currently is seeking nominations and applications for the Deanship of the College of Engineering. The **DEAN** is the chief academic and administrative officer of the College and reports directly to the Provost. The College's activities include instruction at the undergraduate, Master's, and doctoral levels and an extensive research program. The Dean provides leadership in program planning, development, and evaluation; in budget preparation and personnel administration; and in representing the College. Qualifications include an earned doctorate, a distinguished research and teaching record appropriate for a tenured appointment in the College, proven leadership and administrative ability, a commitment to affirmative action, and an understanding of budgeting processes in a complex research university.

Nominations and applications should be sent as soon as possible to:

**Gerard M. Faeth, Chair
College of Engineering Deanship Search Committee
3079 Fleming Administration Building
The University of Michigan
Ann Arbor, MI 48109-1340**

A Nondiscriminatory/Affirmative Action Employer.

EXECUTIVE DIRECTOR

The Desert Botanical Garden, one of the nation's leading botanic gardens, seeks an **EXECUTIVE DIRECTOR**. The Garden is a private, non-profit institution established in Phoenix, Arizona in 1938 and is dedicated to the exhibition, conservation, study, and dissemination of knowledge about arid-land plants of the world. The Executive Director must manage day-to-day operations and have the vision and leadership to provide for the institution's vitality and future growth. The Garden has a staff of 50 and an annual operating budget of 2.3 million dollars with significant programs in public education, desert horticulture, research and conservation. Responsibilities include administration, strategic and long-range planning in conjunction with the Board of Directors, fund raising, implementation of institutional goals, and maintaining the institution's visibility at local, national, and international levels. Candidate must be a skilled administrator, a dynamic and effective spokesperson for the organization, be capable of working with diverse private, corporate, and public organizations within a major metropolitan area, have a demonstrated commitment to the mission of the Garden and its role in conservation and public education. The Garden maintains accessioned, scientific collections of over 20,000 living plants and 40,000 herbarium specimens. The candidate must have an understanding of contemporary practices and standards of museum management. An advanced degree and five years of experience in a museum/botanical garden or related non-profit organization preferred. Salary is commensurate with experience. Send letter, résumé, and a minimum of three professional references by February 28, 1995, to: **P.O. Box 61028, Phoenix, AZ 85082, Attention: Carolyn O'Malley.**

THE KENNEDY KRIEGER INSTITUTE THE JOHNS HOPKINS SCHOOL OF MEDICINE

The Kennedy Krieger Research Institute in conjunction with The Departments of Molecular Biology and Genetics, and Neuroscience of The Johns Hopkins School of Medicine is in search of an individual to develop a strong independent research program in an area broadly related to the expression, regulation, and/or delivery of genes in the central nervous system. Outstanding candidates with expertise in any area of molecular and/or cellular biology will be seriously considered. The successful candidate must have an M.D. and/or Ph.D. degree and a strong interest in developing multidisciplinary collaborations in an expanding program for gene therapy of inherited and acquired brain disorders. Level of **FACULTY APPOINTMENT** will be commensurate with experience. Interested individuals should send curriculum vitae, a brief statement of research plans and three references to: **John Laterra, M.D., Ph.D., Department of Neurology, The Kennedy Krieger Research Institute, 707 North Broadway, Baltimore, MD 21205.** *An Equal Opportunity Employer.*

POSITIONS OPEN

WILLIAM G. ALLYN CHAIR IN MEDICAL OPTICS

THE INSTITUTE OF OPTICS UNIVERSITY OF ROCHESTER Endowed Professorship in Medical Optics

The Institute of Optics invites nominations and applications for a new endowed **PROFESSORSHIP** in Medical Optics. The successful candidate will be expected to have achieved international prominence in some aspect of medical optics, and to merit appointment at the level of full professor. He or she will be expected to conduct a vigorous program of research and to participate actively in The Institute's undergraduate and graduate teaching programs in optical science and engineering. The Institute of Optics, an academic department offering B.S., M.S., and Ph.D. degrees in Optics, has approximately 120 undergraduate students and 85 graduate students in residence. The University's Medical Center and Center for Visual Science offer significant opportunities for collaborative research projects that involve the application of optical science, engineering, and technology to important areas of modern medicine.

Each application should include a letter describing teaching and research interests, a curriculum vitae, and the names of three references. Nominations and applications should be sent to:

**Professor Dennis G. Hall, Director
The Institute of Optics
University of Rochester
Rochester, NY 14627**

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

The Divisions of Molecular Medicine and Genetics and Hematology/Oncology in the Department of Internal Medicine, University of Michigan Medical Center, are seeking two M.D. **FACULTY** with research expertise in Cancer Molecular Genetics (with Board certification in internal medicine and subspecialty credentials in clinical genetics, medical oncology, or hematology). One faculty position is designed for a clinical investigator who will participate in the identification, evaluation, and management of individuals with genetic susceptibilities to cancer; the other position is designed for a physician/scientist with a laboratory program in cancer genetics. Interested applicants should send a curriculum vitae, statement of interest, and list of potential references to: **David Ginsburg, M.D., Division of Molecular Medicine and Genetics, or Robert F. Todd III, M.D., Ph.D., Division of Hematology/Oncology, Department of Internal Medicine, University of Michigan Medical Center, 4520 Medical Science Research Building I, Ann Arbor, MI 48109-0650.** *The University of Michigan is a Nondiscriminatory/Affirmative Action Employer.*

Bacterial Pathogenesis. The Department of Microbiology, University of Virginia is expanding its program in molecular pathogenesis to complement existing strengths in molecular genetics, immunology, and virology. A **TENURE-TRACK FACULTY** position is available in the area of the molecular, genetic or cellular aspects of bacterial pathogenesis. Outstanding candidates with a Ph.D. or M.D. degree and postdoctoral experience are invited to apply for this position. The successful candidate is expected to establish a successful, independent and interactive research program, and will have some teaching responsibilities. Applicants should submit their curriculum vitae, a concise statement of research interests, and selected reprints. These and three letters of reference should be sent to: **Chair, Microbiology Search Committee, Department of Microbiology, Box 441, School of Medicine, University of Virginia, Charlottesville, VA 22908.** Applications should be received by April 1, 1995. *The University of Virginia is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority scientists.*

ZOOLOGICAL MUSEUM UNIVERSITY OF COPENHAGEN

Two **CHAIRS** in systematic zoology are vacant from 1 December 1995: 1) Biodiversity (Living Vertebrates); and 2) Systematic Entomology. Deadline for applications: 3 April 1995. Full text and further information can be obtained from: **The Director, Zoologisk Museum, Universitetsparken 15, DK-2100 Copenhagen, Denmark. FAX: +45 35 32 10 10; Email: cnielsen@zmuc.ku.dk.**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Integrative Biology and Neuroscience (IBN) and Division of Molecular and Cellular Biosciences (MCB) and the Division of Biological Instrumentation and Resources (BIR) seek qualified applicants to serve as Program Directors under the provisions of NSF's Visiting Scientist Program in the programs listed below. Responsibilities include research proposal evaluation, budget development and scientific planning. Broad knowledge and specific research accomplishment are key qualifications. Positions will be filled on a one- or two-year rotational/temporary basis beginning late summer/early fall 1995. The current salary range is \$60,925 to \$94,953; qualification requirements are a Ph.D. or equivalent experience plus 6 or more years of research experience beyond the Ph.D.

For information RE: **IBN** programs: Developmental Mechanisms; Physiology and Behavior; and Neuroscience, call Dr. Bruce Umminger, 703/306-1420; RE: **MCB** programs: Biochemistry; Biophysics, and Genetics and Cell Biology, call Dr. Maryanna Henkart, 703/306-1440; or RE: **BIR** programs: Instrumentation, Data Bases, and Computational Biology, call Dr. James H. Brown, 703/306-1470.

Applicants must submit a resume or other application format of choice, as well as letter(s) of recommendation. Application must specify the job title for which you are applying, and should include the following information: country of citizenship; information about education, including major and type and year of degree(s); complete information about experiences related to this job, including job titles, duties and accomplishments, employer's name and phone number, starting and ending dates and year, and salary to: National Science Foundation, Staffing and Classification Branch, Suite 315, 4201 Wilson Boulevard, Arlington, VA 22230, Attn: Catherine Handle.

Hearing impaired individuals should call 703/306-0189. NSF is an Equal Opportunity Employer committed to employing highly qualified staff that reflects the diversity of our nation.

UNIVERSITY OF COLORADO AT BOULDER

Molecular, Cellular, and Developmental Biology

We seek an internationally recognized scientist of associate or professorial rank with an excellent research program. Preference will be given to scientists studying vertebrate developmental genetics. Appointments could begin as early as January 1996. Send résumé, representative reprints, an outline of future research directions, and three letters of recommendation to: Charlotte Corbridge, MCD Biology, University of Colorado, Boulder, CO 80309-0347. Dossiers must be complete by May 15, 1995.

The University of Colorado at Boulder supports the principle of diversity. We are particularly interested in receiving applications from women, ethnic minorities, disabled persons, veterans and veterans of the Vietnam era.

POSTDOCTORAL CANDIDATE POSITIONS

The Life Sciences Division at the Los Alamos National Laboratory is seeking Postdoctoral Candidates in the following areas:

DNA Repair - Member of a multidisciplinary team to study DNA damage and repair including work in mechanisms of repair of radiation-induced DNA double-strand breaks in mammalian cells. Research areas include regulation of DNA repair gene expression, recognition of DNA damage and signal transduction, identification of relevant DNA repair enzymes, cell cycle control responding to DNA damage, and development of *in vitro* DNA repair assays. Applicants should have a strong background either in protein purification and biochemical analysis or molecular biology techniques. For additional technical information, contact Dr. David J. Chen at (505)667-2789, email: dchen@telomere.lanl.gov.

Advertisement #94088PD.

Cell/Molecular Biology - Investigate mechanisms regulating cell cycle progression. Research is focused on cyclin dependent kinases, their substrates, or molecules involved in their regulation. Experience in molecular biology and protein chemistry desired. For additional technical information, contact Dr. Joe D'Anna, (505)667-1636. **Advertisement #94089PD.**

Neoplastic Transformation/Apoptosis - Perform research in combining flow cytometric and molecular techniques for investigating the relationship between cellular senescence and apoptosis. Experience in mammalian cell biology and molecular biology highly desirable. For additional technical information, contact Dr. Paul Kraemer at (505)667-2794, email: kraemer@telomere.lanl.gov. **Advertisement #94090PD.**

Cell/Molecular Biology - Investigate oxidative stress-induced alterations in cell cycle progression. Research is focused on mechanisms involved in mediating cell cycle checkpoints. Experience in cell cycle regulation, protein chemistry and molecular biology highly desired. For additional technical information, contact Dr. Bruce E. Lehnert at (505)667-2753, email: lehnert@lanl.gov. **Advertisement #94091PD.**

Cell Biology/Cytometry - Perform research in the interface of cell regulation and DNA repair mechanisms using combined technologies of immunofluorescence cell staining, flow cytometry and image cytometry. Experience in mammalian cell biology, immunofluorescence and biochemical analysis of proteins highly desired. Training in image and flow cytometry is available. For additional technical information, contact Dr. Harry Crissman at (505)667-2791, email: crissman@telomere.lanl.gov. **Advertisement #94092PD.**

Cell Biology/Chromatin Structure/Cytometry - Perform research in mammalian chromatin structure using techniques of DNA fluorochrome binding, flow and image cytometry. Emphasis will be on the analysis of DNA damage and repair at the molecular and cellular levels. Experience in mammalian cell biology and with fluorochrome-labeling techniques and biochemical analysis of DNA required. Training in flow and image cytometry will be provided. For additional technical information, contact Dr. Harry Crissman at (505)667-2791, email: crissman@telomere.lanl.gov. **Advertisement #94093PD.**

A PhD completed within the last 3 years or soon to be completed required. Annual starting salaries range from \$41,250 to \$44,570 plus an excellent and comprehensive benefits package. For consideration: submit **TWO COPIES** of a curriculum vitae and publication listing to Ms. Mary Anne With, MS P290, Advertisement #, Los Alamos National Laboratory, Los Alamos, NM 87545. Advertisement # must be referenced in address. Affirmative Action/Equal Opportunity Employer. Individuals with disabilities needing reasonable accommodation should call (505)667-8622. A teletype Device for the Deaf (TDD) is available by calling (505)665-5357. Los Alamos National Laboratory is operated by the University of California for the US Department of Energy.

Los Alamos
NATIONAL LABORATORY

POSITIONS OPEN

UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER INSTITUTE FOR HUMAN GENE THERAPY DIRECTOR Vector Design and Production Facility

We are seeking a scientist with experience in virology and Good Manufacturing Practices (GMP) to direct the Human Applications Laboratory. This 3,000 net square feet facility specializes in the design of recombinant viruses for somatic gene transfer and their production and characterization for clinical trials. This individual will supervise a staff of at least four research technicians. A Ph.D. in the biological sciences with relevant postdoctoral training and working knowledge of virology are required. Experience in a biotechnology/pharmaceutical company in the context of GMP is highly desirable.

Please send a cover letter and curriculum vitae to:

James M. Wilson, M.D., Ph.D.
Director, Institute for Human Gene Therapy
University of Pennsylvania Medical Center
Room 204 Wistar Institute
3601 Spruce Street
Philadelphia, PA 19104-4268

An Equal Opportunity/Affirmative Action Employer.

PLANT ECOLOGY FACULTY

The Department of Biology invites applications for a **TENURE-TRACK**, full-time undergraduate teaching position with normal faculty duties; research is encouraged.

Qualifications: Applicants should have a Ph.D. or equivalent in plant ecology with the ability to teach forestry, plant physiology, or natural resources. Interest and excellence in undergraduate teaching and advisement, ability to lead students in undergraduate research and to write grant proposals, and a strong background in remote sensing including GIS.

Complete applications consist of a letter of application addressing the above qualifications, curriculum vitae, unofficial transcripts and three letters of reference. Only complete applications received prior to application deadline will be considered. Application materials should be sent to: **Plant Search, Office of Employee Relations, Lake Superior State University, Administrative Building, Sault Ste. Marie, MI 49783** or FAXED to: **906-635-2111**. Inquiries to **Karel Rogers: 906-635-2267** or **krogers@lakers.lsu.edu**. Application deadline: February 20, 1995. *An Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

INVERTEBRATE BIOLOGY VISITING ASSISTANT PROFESSOR

The Biology Department, Hamilton College, invites applications for a one year visiting position at the **ASSISTANT PROFESSOR** level, effective 1 July 1995. Applicants must have a Ph.D. degree; postdoctoral experience preferred. Teaching for the successful applicant will include a spring term intermediate level survey course in invertebrate biology, a fall term upper level course in his/her specialty, and in the fall term the animal physiology portion of the introductory core course sequence. Supervision of senior research projects is also expected. Send curriculum vitae, statements of teaching and research interests, and three letters of reference to: **David A. Gapp, Chair, Biology Department, Hamilton College, 198 College Hill Road, Clinton, NY 13323-1292**. Review of applications will begin on 1 March 1995 and continue until the position is filled. *Women and members of minority groups are encouraged to apply. Hamilton College is an Equal Opportunity/Affirmative Action Employer.*

VISITING POSTDOCTORAL POSITION, 85% time, at an annual salary of \$26,220 × .85 or \$22,287, in mammary cancer research available immediately, to study biological and molecular events involved in mammary carcinogenesis employing mouse and rat experimental systems. Studies will focus on determining phenotypic and genotypic changes which occur during the transition from normal mammary epithelial cells to preneoplastic and neoplastic state utilizing carcinogen and hormonally induced mammary tumor models. The successful candidate will be a recent Ph.D. with experience in cell biology, cell culture and basic biochemical and molecular techniques. Please send curriculum vitae and references to: **S. Nandi, Ph.D., Room 491 LSA, Cancer Research Laboratory, Department of Molecular and Cell Biology, University of California, Berkeley, CA 94720-2751**. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MOLECULAR IMMUNOLOGY JUNIOR OR SENIOR FACULTY

The Department of Microbiology and Immunology invites applications for a junior or senior level, **TENURE-TRACK POSITION** for an immunologist whose research interests are directed to molecular and/or cellular analyses of contemporary problems in immunology. Senior candidates should have strong records of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop high quality, extramurally funded independent research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. The Department offers a high quality, interactive intellectual environment with 80% of the faculty holding active extramural research grants.

A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for: oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, DNA sequencing, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive.

Review of applications will continue until the position is filled. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals and three letters of reference to be sent to:

Dr. Terrance G. Cooper
Department of Microbiology and Immunology
The University of Tennessee, Memphis
858 Madison Avenue, Room 801
Memphis, TN 38163

The University of Tennessee, Memphis is an Equal Employment Opportunity/Title IX/Section 504/ADA Employer.

POSTDOCTORAL FELLOWSHIPS. The Monell Chemical Senses Center announces the immediate availability of postdoctoral fellowships in interdisciplinary training and research in the chemical senses. We are seeking applicants with a recent Ph.D. in one of the following disciplines: animal behavior; biochemistry; biology; chemistry; ecology; epidemiology; genetics; neuroscience; nutrition; physiology; psychology; sociology; or zoology. Research activities at the Center range from studies on receptor mechanisms of taste, smell and chemical irritation at the subcellular level, including molecular genetics, to investigations on the ecological, social and reproductive significance of chemical signals. The Center also maintains a major Chemosensory Clinical Research Center with Jefferson Medical College of Thomas Jefferson University. Individuals having interests in conducting clinical and/or biomedical research on taste, smell, nutrition or related areas also are encouraged to apply. Stipend will depend upon level of experience. Please send a brief description of previous research interests, curriculum vitae and three references to: **Dr. Gary K. Beauchamp, Director, Monell Chemical Senses Center, 3500 Market Street, Philadelphia, PA 19104-3308**. *The Monell Center is an Equal Opportunity Employer and encourages applications by women and minorities.*

Several positions for **POSTDOCTORAL FELLOWS**, graduate students, and research assistants are available in the Molecular Cardiology Laboratories, The Centre for Cardiovascular Research at The Toronto Hospital. The current research focuses on the pathogenesis of myocardial failure with a particular interest in molecular biology (ion channels, signal transduction and gene expression) and oxidative stress. Please make enquiries to: **Dr. M. J. Sole, Director, The Centre for Cardiovascular Research, The Toronto Hospital, Toronto, Ontario M5G 2C4 Canada**. Telephone: **416-340-3471**; FAX: **416-340-5985**.

POSTDOCTORAL POSITION, after July 1, 1995, as member of large RNA structure-function research group. Applicants should have had experience in high field NMR spectroscopy of macromolecules. Facilities include a 500 MHz NMR (new console and probes upgrade completed this fall), workstations and software for processing and NMR restrained molecular dynamics calculations and molecular modeling. To be considered reply with detailed résumé, date you are available, brief research experience citing NMR technical ability, and three letters of reference sent to: **Dr. Paul F. Agris, Biochemistry, Box 7622, North Carolina State University, Raleigh, NC 27695-7622**.

POSITIONS OPEN

BEHAVIORAL BIOLOGY SCRIPPS INSTITUTION OF OCEANOGRAPHY

Applications are invited for a faculty position at the **ASSISTANT, ASSOCIATE** or full **PROFESSOR** level in the broad area of behavioral biology. The specific area of research is open and may include cell and molecular, physiological, and/or ecological and evolutionary approaches to analysis of the behavior of marine organisms. The level of this tenure-track (or tenured) appointment is open; exact rank and salary will be commensurate with qualifications and experience in accordance with University of California academic policy and pay scales. Applicants must show evidence of excellence and independence in research as demonstrated by their publication record and letters of reference and will be expected to maintain a strong extramurally funded research program. The position will involve teaching and research supervision at the graduate level with some opportunity for undergraduate instruction. Applicants must hold a doctoral degree at the time of appointment. Applications should include a detailed résumé with a description of research and teaching interests and plans, publication list, and the names and addresses of at least three references to: **Chair, Behavioral Biology Search, Scripps Graduate Department, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0208** by March 31, 1995. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION BRIGHAM AND WOMEN'S HOSPITAL HARVARD MEDICAL SCHOOL

Position is available for two years to study a novel mouse model of colitis. Focus is on the isolation and characterization of cells, proteins and their cDNA involved in tissue protective and injury mechanisms in the bowel. Experience with cell isolation, flow cytometry, immunohistochemistry, and biochemical and molecular biology techniques is required. **Dr. Frendl's** laboratory is part of the Ischemia-Reperfusion Center and is affiliated with the Harvard Digestive Disease Center. Send curriculum vitae and three names of referees to: **Dr. G. Frendl, Department of Anesthesia, Ischemia-Reperfusion Center, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115**. FAX: **617-278-6957**. *Brigham and Women's Hospital/Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to elucidate the mechanism of selective degradation of a mutant protein in plants (see *Pl. Molec. Biol.*, 11:717). Recent work indicates that this selective protease is vacuolar. The objectives of the project will be to identify and clone the protease involved and produce an antisense construct of the protease in an attempt to stabilize mutant proteins. Salary: \$29,898. Send curriculum vitae and three letters of recommendation to: **E. M. Herman, USDA, ARS, Plant Molecular Biology Lab, Building 006, 10300 Baltimore Avenue, Beltsville, MD 20705-2350**. Telephone: **301-504-5258**; Email: **eherman@asrr.arsusda.gov**. *ARS is an Equal Opportunity Employer.*

PROCESS ENGINEER: Perform process development and integration of VLSI interconnects; perform system start-up, process troubleshooting, and product support of sputtering system. Knowledge of solid state physics; CMOS technology; VLSI multi-level interconnect; thin film deposition; plasma etch; yield enhancement; ultra high vacuum technology; characterization of semiconductor thin films; methodology of experimental design. Ph.D. in Materials Science or Engineering, Electrical Engineering, or Physics required. \$4,987 per month; 40 hours per week. Job site/interview: Palo Alto, California. Send ad and résumé to: **Job No. VL66303, P.O. Box 269065, Sacramento, CA 95826-9065**.

POSTDOCTORAL RESEARCH ASSOCIATE position in plant molecular biology at the USDA-ARS, Beltsville Agricultural Research Center to clone by map position the gene residing at the *Rhg4* locus conferring resistance to soybean cyst nematode race 3. Ph.D. and training in molecular biology required. Salary: \$36,174. Send résumé and names of three references to: **Dr. Benjamin F. Matthews, USDA-ARS, PMBL, Building 006, Beltsville, MD 20705**. Telephone: **301-504-5730**. *The USDA is an Equal Opportunity Employer.*

Director Education Operations & Outreach

The National Research Council (NRC) seeks a Director of Education Operations and Outreach. The Director will be responsible for overall planning and management of major portions of the NRC program of science and mathematics education reform. The Director will be responsible for all managerial, administrative, and financial affairs with authority for independent action in achieving program goals within institutional policy and in consultation with the NRC Executive Officer and NRC Chairman. The Director will: develop appropriate programmatic agendas and strategies to achieve program objectives; identify current and emerging issues to be addressed by NRC program activities; design program and study plans; seek and develop support for new and follow-up projects and studies; direct, review, and contribute to the writing of final reports and publications; plan and present orally research findings to sponsors and the broader professional/policy making community; oversee and coordinate the program's technical, financial, reporting, and administrative operations; prepare financial plans and ensure compliance with the institutional policies and contract/grant requirements; develop and review budgets and monitor programs' and projects' general financial affairs. A Ph.D. or equivalent, preferably related to science, mathematics, engineering, science or mathematics education, and at least 6 to 10 years experience in related research, program evaluation, and policy analysis, including demonstrated responsibility for and success in project management is required. A qualified candidate will demonstrate scientific and technical expertise related to the program and knowledge of the scientific/technical community and will be widely recognized by senior experts within the field for scientific, technical and educational achievements. Demonstrated effective management skills including staff supervision, administration of program financing and budgets, organization of project assignments and tasks and oral/written communications is essential. Demonstrated knowledge of federal agencies related to unit's activities and their procurement practices is highly desirable. Please submit a resume and salary requirements to: NRC/NRCEO (HA 450-DMG), 2101 Constitution Avenue, NW, Washington, DC 20418. EOE.



LeukoSite is a growing Biopharmaceutical Company focused on the process of tissue-specific leukocyte trafficking and the discovery of novel therapies for inflammatory and autoimmune diseases. Founded by Tim Springer of Harvard Medical School, an outstanding team of scientists has been assembled to lead the Company's research and discovery program.

LEUKOSITE INC

DIRECTOR, MOLECULAR BIOLOGY

Applications are sought for a senior management position as Director of Molecular Biology. Through extensive publications in peer reviewed journals, applicants will have established a national reputation in their chosen field. Candidates should have broad experience in a range of techniques including cloning and gene expression. Respondents should have a strong interest or experience in the field of inflammation, a hands-on approach, and a commitment to an integrated and team oriented approach to drug discovery. Prior industry experience would be advantageous.

Respondents should submit their complete CV and the names of three references to: Personnel Director, LeukoSite, Inc., 215 First St., Cambridge, MA 02142. An Equal Opportunity Employer.

**BECTON
DICKINSON**

"INNOVATIVE PRODUCTS DEVELOPED BY INNOVATIVE MINDS"

Collaborative Biomedical Products Becton Dickinson Labware develops, manufactures and sells innovative products for research in basic cell science on a worldwide basis. As a fast growing subsidiary of Becton Dickinson, a leading \$2.5 billion medical technology corporation, we can offer the qualified professional broad opportunities for scientific breakthroughs and career advancement. Immediate opening exists for the following individual.

**Becton
Dickinson
Labware**

SENIOR SCIENTIST (Research & Development)

We seek a scientist who thrives in a fast-paced team-oriented environment to develop new products in the areas of extracellular matrix, cytokines and *in vitro* cell culture systems. Participating in product development strategy, product testing and patent applications, you will also provide support to sales, marketing, manufacturing and QA/QC.

Qualified candidates will have an advanced degree in Protein Biochemistry or Cell Biology, and up to 3-5 years post-doctoral experience in the isolation and characterization of extracellular matrix proteins or proteoglycans, and cell-matrix interactions. Strong analytical and communication skills are essential.

We offer competitive compensation and comprehensive benefits.

Qualified applicants may submit or fax resume in complete confidence to Human Resources, Collaborative Biomedical Products, Becton Dickinson Labware, Two Oak Park, Bedford, MA 01730. FAX: (617) 275-7670

Collaborative Biomedical Products

An Equal Opportunity Employer M/F/D/V/H
Females and minorities are encouraged to apply.

Careers in Biotechnology and Pharmaceuticals: Beyond Discovery

17 March 1995

On 17 March, *Science* will publish a special advertising section titled *Careers in Biotechnology and Pharmaceuticals: Beyond Discovery - Science Careers Up and Down the Production Stream*. This is a popular annual advertising section dedicated to biopharmaceutical employment matters with bonus distribution to two U.S. job fairs, one on each coast. This section will explore the exciting next phase of the biotech industry. It will look at how the manufacturing, regulatory, and service sectors of the modern biopharmaceutical company are growing, and it will highlight career paths in areas such as:

- Clinical Trials
- Research and Development
- Regulatory Affairs
- Quality Assurance and Quality Control
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Careers in Biotechnology and Pharmaceuticals: Beyond Discovery is a "must-read" section for scientists at every level. Don't miss this chance to be part of one of the biggest and most industry-relevant advertising sections of the year!

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This highly visible issue will be distributed at two job fairs:

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- Biotech/Pharmaceutical Job Fair, 28-29 April, Cambridge, Massachusetts.

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SCIENCE

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Biodiversity Science and Policy



An International
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**March 9 - 10,
1995**

Presented by the
American Museum
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This conference will address the current scientific evidence for global biodiversity and its extinction, examine the societal implications of these findings, and explore how national and international policy can be shaped to respond to these global challenges.

Participating are thirty-five leading scientists and policy experts, including:

Thomas Lovejoy, *Smithsonian Institution*
Peter Raven, *Missouri Botanical Garden*
Rodrigo Gámez, *Instituto Nacional de
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Norman Myers, *Oxford*
Jeffrey McNeely, *World Conservation Union*
Walter Reid, *World Resources Institute*

To register: The conference is free of charge. For registration materials or further information, call 212-769-5192; e-mail CONFERENCE@AMNH.ORG; or write to the Biodiversity Conference, Center for Biodiversity and Conservation, American Museum of Natural History.

American Museum of Natural History

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The National Institutes of Health National Center for Human Genome Research

The intramural program of the National Center for Human Genome Research (NCHGR), the National Institutes of Health (NIH) in Bethesda, Maryland, is now in operation. Scientists with a unique range of expertise and interests have been recruited to focus on the identification, localization, diagnosis, and treatment of human genetic disease.

We are not actively recruiting a tenure-track scientist in the field of

HUMAN AND MURINE GENOMICS

for a position within the Laboratory of Genetic Disease Research. The successful applicant will be provided with the space and resources needed to pursue an independent research program in mapping, isolating, and characterizing genes involved in human and/or murine genetic disease.

Candidates must have a Ph.D. and/or M.D. as well as advanced training in genome science: demonstrable expertise in genetic and physical mapping and positional cloning in humans or mice.

Competitive salary and benefit packages are available. Please forward curriculum vitae and three references to:

Robert L. Nussbaum, M.D.
Chief, Laboratory of Genetic Disease Research
NIH/NCHGR
Building 49, Room 4A72
49 Convent Drive MSC 4470
Bethesda, MD 20892-4470

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Education/Research

Study Director Undergraduate Science Education

The National Research Council seeks a Study Director for a multidisciplinary Committee on Undergraduate Science Education. The Committee is currently implementing programs and preparing reports that focus on improving scientific literacy for all undergraduates. The Director works with the Committee membership in planning initiatives and carrying out projects. The Director is responsible for research, data collection, analysis and dissemination; all administrative and logistical support of the Committee in meeting its objectives; management of the Committee's staff; working with all sectors of the undergraduate science community; public presentations of the Committee's work; liaison and cooperative programs with educational, scientific, and funding organizations at all levels; all aspects of fund raising and fiscal management; and working effectively with staff in other NRC and national education initiatives. Ph.D. or equivalent, preferably in physical or life sciences or education; and at least 4-5 years relevant experience including undergraduate teaching is required. An understanding of the different types of undergraduate institutions and approaches to teaching and learning is essential. Familiarity with federal agencies and private organizations engaged in the reform of undergraduate and pre-college science education is desirable. Excellent organizational, interpersonal, writing, editing, and management skills are necessary. Applications will be accepted until February 28, 1995. Please submit resume and salary requirements to: NRC/CPSMA (NAS 285-NM), 2101 Constitution Avenue, NW, Washington, DC 20418. EOE.



POSITIONS OPEN

POSTDOCTORAL POSITIONS

Two **POSTDOCTORAL POSITIONS** are available for molecular-cellular biologists to study G protein coupled signal transduction pathways in the CNS. The Molecular Pathophysiology Program provides the opportunity to conduct exciting and imaginative cellular and molecular biological research in the investigation of drug and disease induced neuroplasticity changes, and the pathophysiology of neuropsychiatric disorders. Position 1: Post-translational modification of proteins in the CNS. The successful candidate will have a Ph.D. in Biochemistry, Pharmacology or related discipline. Preference will be given to applicants with experience in protein phosphorylation/dephosphorylation, 2-D electrophoresis and lipid biochemistry. Position 2: Neuropharmacology of Gene Expression in the CNS. The successful candidate will have a Ph.D. in Molecular Biology, Neuroscience or related discipline. Preference will be given to applicants with experience in recombinant DNA methodologies and targeted insertion of genes.

Please send full curriculum vitae, brief statement of research interest, plus names and addresses of three references to:

Hussini K. Manji, M.D.
c/o Chairman's Office
Department of Psychiatry and
Behavioral Neurosciences
Wayne State University School of Medicine
9B University Health Center
4201 St. Antoine
Detroit, MI 48201

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POSTDOCTORAL POSITIONS

Dana Farber Cancer Institute
Harvard Medical School

To study the role of signal transduction, protein phosphorylation and transcriptional regulation in normal and malignant cells responding to stresses such as hypoxia and ionizing radiation. Applicants will join a highly collaborative group studying molecular responses to cellular stresses such as heat shock, oxidant stress and radiation starting March 1, 1995. Applicants should have Ph.D./M.D. and proven expertise in the study of protein phosphorylation or transcriptional regulation. Please send curriculum vitae and three references (with telephone numbers) to: **Drs. Mary Ann Stevenson and Stuart K. Calderwood, Dana Farber Cancer Institute and Joint Center for Radiation Therapy, Shields Warren Building, 50 Binney Street, Boston, MA 02115.**

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POSTDOCTORAL ASSOCIATE: Positions available immediately to help apply our findings from *Drosophila* molecular genetics to the control of insect pest populations. Multi-year project in a highly collaborative, multidisciplinary environment. Experience and training in *Drosophila* or other invertebrate molecular genetics desired, but individuals with appropriate training/expertise in related areas will be considered. Knowledge and research experience in the molecular biology of genes controlling terminal differentiation of cells also preferred. Experience and expertise in transformation of metazoans, particularly arthropods, will be helpful. Send curriculum vitae, and names of three references to: **Professor T. A. Miller, Department of Entomology, University of California, Riverside, CA 92521. Telephone: 909-787-3886.** The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

POSTDOCTORAL POSITION is available immediately to study the roles of extracellular matrix proteins in human diseases using ES cell technology. A Ph.D. or M.D. in a related area with expertise in molecular biology, and mammalian cell culture is desired. Applicants must be U.S. citizens or permanent residents. Please send a copy of curriculum vitae and three letters of reference to: **Dr. Jing Zhou, Renal Division, Brigham and Women's Hospital, Harvard Medical School, 75 Francis Street, Boston, MA 02115. FAX: 617-732-6392.**

POSITIONS OPEN

POSTDOCTORAL POSITION HUMAN ANATOMY

The Department of Anatomy, Northeastern Ohio Universities College of Medicine is seeking a **POSTDOCTORAL FELLOW** to participate in teaching medical gross anatomy/embryology, and to contribute to the research program of the Department. The term of the appointment is 12 months, with an additional 12 month appointment possible at the discretion of the Department. A salary of \$25,000 per annum, plus fringe benefits, is offered for this position. The appointment begins July 1, 1995. Minimum qualifications are possession of the Ph.D. degree and experience in teaching a dissection based course in human gross anatomy. The area of research focus is open, but the Department is interested in expanding its strengths in vertebrate paleontology, paleoanthropology, and morphological aspects of organismal evolution.

The Northeastern Ohio Universities College of Medicine is part of a consortium that includes Kent State University, Akron University, and Youngstown State University. Also included in the research base of the consortium is the Cleveland Museum of Natural History. A doctoral program in Biological Anthropology is offered through the School of Biomedical Sciences at Kent State University. Applications for this position consisting of a cover letter stating research interests, curriculum vitae, and three letters of recommendation should be sent to: **Dr. Steve Ward, Department of Anatomy, Northeastern Ohio Universities College of Medicine, P.O. Box 95, 4209 State Route 44, Rootstown, OH 44272.** The deadline for applications is April 15, 1995.

Two **POSTDOCTORAL FELLOW POSITIONS** to study nitric oxide and related oxidants in regulation of vascular tone and as modulators of tissue injury in inflammation. One requires background in oxidant biochemistry; the second requires background in molecular biology. Fellows will work within a multidisciplinary group of Ph.D. and M.D. researchers with experience in cell culture, cellular biochemistry, cellular electrophysiology, *in vitro* physiology and pharmacology, and clinical investigations. Work is primarily with cultured endothelial cells and animal models but all avenues of productive investigation available. Appointments are for two to three years. Send letter, curriculum vitae, and three references to: **Dr. James Royall/Dr. Stephen Lewis, Department of Pediatrics, University of Iowa, 200 Hawkins Drive, Iowa City, IA 52242. Telephone: 319-356-1615; FAX: 319-356-4855.** The University of Iowa is an Equal Employment Opportunity/Affirmative Action Employer and strongly encourages women and minorities to apply.

POSTDOCTORAL POSITION available immediately to study the molecular and cellular biology of uroepithelial differentiation. A strong background in molecular biology (Ph.D.) is required. The candidate will be in a stimulating intellectual environment and will have the opportunity to collaborate with a diverse faculty of basic scientists at Harvard Medical School. Send curriculum vitae and names of three references with telephone numbers to: **Dr. Anthony Atala, Laboratory for Tissue Engineering, Children's Hospital and Harvard Medical School, 300 Longwood Avenue, Boston, MA 02115.**

POSTDOCTORAL POSITION is immediately available to study the endocytosis and intracellular trafficking of growth factor receptors. Research will focus on molecular mechanisms of receptor sorting at the cell surface and in endosomes, and on the role of endocytosis in growth factor signaling. Strong background in molecular biology is required. Please submit curriculum vitae including names and addresses of three references to: **Dr. Alexander Sorkin, Department of Pharmacology, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. FAX: 303-270-7097.** The University of Colorado Health Sciences Center is committed to Equal Employment Opportunity/Affirmative Action.

POSTDOCTORAL POSITION available immediately to study voltage-dependent ion channel gating and regulation. Require Ph.D. or M.D. and experience using single-channel and macroscopic patch-clamp recordings and/or molecular biology. Applicants should forward curriculum vitae with names of references and description of previous research experience to: **Dr. T. Hoshi, Department of Physiology and Biophysics, The University of Iowa, Iowa City, IA 52242. FAX: 319-335-7330; Email: Toshinori-Hoshi@uiowa.edu.** The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL RESEARCH Cooperman Breast Cancer Fellow

The John Wayne Cancer Institute has an immediate opening for a **POSTDOCTORAL FELLOW** to study second messenger signaling in human breast cancer and the role of growth factors, hormones and phospholipases. Requires recent Ph.D. or M.D./Ph.D., experience in cell biology/tissue culture, protein kinases, lipid biochemistry and immunocytochemistry.

Competitive salary/benefits package. Please submit résumé, with cover letter, to: **Dr. M. C. Cabot, Chief, Breast Cancer Research Program, John Wayne Cancer Institute at St. John's Hospital and Health Center, 2200 Santa Monica Boulevard, Santa Monica, CA 90404.** An Equal Opportunity Employer.

MEMBRANE TRANSPORT

POSTDOCTORAL POSITIONS are available for studies of the molecular structure and mechanism of the neurospora plasma membrane H^+ -ATPase. This membrane transporter has been crystallized and its structure is beginning to emerge. An efficient mutagenesis system for the H^+ -ATPase has also been developed. Join us in our efforts to elucidate the molecular mechanism of membrane transport catalyzed by this enzyme. Send curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, CB No. 7365, F.L.O.B., University of North Carolina, Chapel Hill, NC 27599.** An Equal Opportunity Employer.

POSTDOCTORAL-NEUROANATOMY

Study synaptic organization in auditory system local circuits: electrophysiology, intracellular labeling, electron microscopy, *in situ* hybridization, molecular/immunocytochemical techniques used to study gene expression. Interdisciplinary group of auditory neuroscientists; broad area in which to develop a research program. NIH grant support. **Dr. Kent Morest, Neuroscience Center, MC3405, University of Connecticut Health Center, Farmington, CT 06030.**

POSTDOCTORAL POSITION to study the role of the sphingomyelin signaling pathway relative to the expression of specific genes and/or the activation of targeted enzymes in a variety of cell systems. Experience in biochemistry and molecular biology desirable. Send curriculum vitae and the names of three references to: **Dr. Leslie R. Ballou, Department of Veterans Affairs Medical Center, Research 151, 1030 Jefferson Avenue, Memphis, TN 38104. Telephone: 901-577-7283; FAX: 901-577-7273.** The University of Tennessee, Memphis, is an Equal Employment/Affirmative Action/Title VII/Title IX/Section 504/ADA Employer.

POSTDOCTORAL POSITION available to study signaling mechanisms in mammalian cardiac myocytes using biophysical techniques. Projects include 1) identification of second messengers in the actions of endothelin, opiates and adenosine, and 2) effects of protein phosphorylation in normal and heart failure myocytes. Recent Ph.D. in Physiology/Biophysics desirable. Submit curriculum vitae and names of references to: **Dr. J. W. Walker, Department of Physiology, 1300 University Avenue, Madison, WI 53706.**

POSTDOCTORAL POSITION: Applications are invited for a postdoctoral position investigating the molecular mechanisms of homologous recombination in the yeast *Saccharomyces cerevisiae*. Individuals trained in genetics, biochemistry or molecular biology are encouraged to apply. Applicants should send curriculum vitae, a brief description of research interests and three letters of recommendation to: **Dr. Lorraine Symington, Department of Microbiology, Columbia University, 701 West 168th Street, New York, NY 10032 USA.** Columbia University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION is available immediately for a five year project to study hormonal regulation of gene expression in gonads. Experience with molecular and cellular techniques is required, and a background in reproductive endocrinology is preferred. Please send curriculum vitae and names of three references to: **Dr. Pei Feng, Room N3W50, UMH, University of Maryland School of Medicine, 22 South Greene Street, Baltimore, MD 21201. FAX: 410-328-1623.** An Equal Opportunity Employer.

Technical Project Leader

Gillette Research Institute, a division of The Gillette Company, has a new position for a research scientist to develop a program in female shaving. This scientist will have technical leadership responsibility to establish a research project that will lead to new personal care products. Candidates must possess a Ph.D. in Biological Sciences with at least five years of progressive experience in academics or industry. Experience in human skin research is desirable.

Gillette Research Institute is located outside Washington, D.C., in a region that includes a wide variety of government, private and academic scientific laboratories. We offer an excellent compensation and benefits package. Qualified candidates should forward a resume to:



Gillette Research Institute
Human Resources Department
401 Professional Drive
Gaithersburg, MD 20879

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Postdoctoral Fellows

The Skin Biology Research Center of The R.W. Johnson Pharmaceutical Research Institute seeks candidates to join a group of scientists investigating the basic mechanisms underlying the structural and molecular biology of skin, scarring and hair growth. Scientists specifically interested in the biology of growth and development at a molecular level are encouraged to apply.

These positions provide liberal research support, excellent library facilities, and a good benefits package. Although outside grant support is not required, publication of experimental results is strongly encouraged.

Ours is a smoke free workplace ideally located in central New Jersey, near Princeton and midway between New York City and Philadelphia. To apply, send your resume suitable for scanning into our state-of-the-art database (i.e., clean/clear, no graphics, and preferably unfolded) to; Dept. 171, Johnson & Johnson Recruiting, Employment Management Center, P.O. Box 16597, New Brunswick, NJ 08906-6597. An equal opportunity employer supporting diversity in the work place.

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Research fellowships are currently available with the Cannon Research Facility of the Carolinas Medical Center and the Charlotte-Mecklenburg Hospital Authority, a diverse and comprehensive premier teaching and research medical center. The following fellowships are currently available:

INTERVERTEBRAL DISC POSTDOCTORAL FELLOWSHIP

Will study the cell biology of the intervertebral disc cell in humans and animal models. Expertise in tissue culture, cytokines and molecular biology is required; previous experience with connective tissue matrix desirable. Research is under the direction of Dr. Helen Gruber.

TISSUE BIOENGINEERING POSTDOCTORAL FELLOWSHIP

The fellowship is part of a fully funded tissue bioengineering grant that is a joint effort of the Department of General Surgery Research of CMC and the Department of Pediatric Surgery at Harvard and the Department of Chemical Engineering at MIT. The fellowship is under the direction of Dr. Walter D. Holder, Jr. in collaboration with Drs. Joseph Vacanti and Robert Langer. Candidate is responsible for assisting in a tissue bioengineering project for the development of a soft tissue bioprosthesis and for related independent research.

At least one year of research experience in the appropriate fields and a PhD, MD or DMV credentials are required.

We offer competitive salaries and excellent benefits. Qualified candidates should forward CV, transcripts, three references, and a brief statement of research experience to:

**CHARLOTTE-MECKLENBURG
HOSPITAL AUTHORITY**
Human Resources
P.O. Box 32861
Charlotte, NC 28232-2861

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MOLECULAR IMMUNOLOGY JUNIOR OR SENIOR FACULTY POSITION AVAILABLE

The Department of Microbiology and Immunology invites applications for a junior or senior level, tenure-track position for an immunologist whose research interests are directed to molecular and/or cellular analyses of contemporary problems in immunology. Senior candidates should have strong records of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop high quality, extramurally funded independent research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. The Department offers a high quality, interactive intellectual environment with 80% of the faculty holding active extramural research grants.

A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, DNA sequencing, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive.

Review of applications will continue until the position is filled. Applications should consist of a curriculum vita, copies of several recent publications, a brief statement of future research goals and three letters of reference to be sent to:

Dr. Terrance G. Cooper
Department of Microbiology
and Immunology
The University of Tennessee, Memphis
858 Madison Avenue, Room 801
Memphis, Tennessee 38163

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IX/ Section 504 /ADA Employer*

Research Scientist

Bio-Rad Laboratories is a world leader in the fields of life science research products, clinical diagnostics and analytical instruments. Our continued growth has created a need for a dynamic scientific professional to work in our Lab Products Division.

The successful candidate will have a BS/MS or equivalent in a biological science with 2+ years laboratory experience. Must have good working knowledge of current methods of electrophoresis, chromatography and associated techniques including the analysis and purification of proteins and nucleic acids and isoelectric focusing.

For consideration, please send your resume to: Bio-Rad Laboratories, 2000 Alfred Nobel Dr., Dept. 056, Hercules, CA 94547. An EEO/AA Employer.

BIO-RAD

Bio-Rad Laboratories

POSITIONS OPEN

POSTDOCTORAL POSITIONS MOLECULAR- AND IMMUNO-TOXICOLOGY MEDIATED BY THE Ah RECEPTOR

Three POSTDOCTORAL POSITIONS are available for individuals interested in studying the biochemistry and molecular biology of the Ah receptor and how it mediates the immunotoxicity elicited by dioxins and related compounds. One position at the University of Rochester will focus on the function of the Ah receptor, its interaction with other proteins and DNA, and the mechanisms whereby it modulates gene expression in a tissue- and species-specific manner. Two positions, one at SUNY Health Science Center in Syracuse, will focus on identifying the cell targets and genes altered leading to immunomodulation in the thymus and bone marrow. Qualified candidates, M.D. or Ph.D., should possess a good background in biochemistry, molecular biology, or immunology. Send a curriculum vitae and the names and telephone numbers of three references to either: Dr. Thomas A. Gasiewicz, Department of Environmental Medicine, University of Rochester Medical Center, Rochester, NY 14642, or Dr. Allen E. Silverstone, Department of Microbiology and Immunology, SUNY Health Science Center, 750 East Adams Street, Syracuse, NY 13210. *The University of Rochester is an Equal Opportunity/Affirmative Action Employer. The SUNY Health Science Center at Syracuse is an Affirmative Action/Equal Employment Opportunity/ADA Employer, committed to excellence through diversity.*

CLEVELAND CLINIC FOUNDATION POSTDOCTORAL POSITION IN BIOCHEMISTRY/MOLECULAR BIOLOGY

POSTDOCTORAL POSITION available to a candidate with experience in biochemistry and molecular biology for a NIH-funded study of the vascular biochemistry and molecular biology of homocysteine, an independent risk factor for cardiovascular diseases. Studies will include but are not limited to: 1) The regulation of gene expression in cultured human aortic endothelial and smooth muscle cells; 2) *in situ* hybridization studies in vascular cells and tissue; 3) mechanisms of atherosclerosis and thrombogenesis. Opportunities for collaboration in clinical studies in the Department of Cardiology are also available. Please send curriculum vitae and the names of three references to: Donald W. Jacobsen, Ph.D., Department of Cell Biology, FF4-07, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195. *The Cleveland Clinic Foundation is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.*

POSTDOCTORAL POSITION SYNAPTIC NEUROTRANSMISSION

A POSTDOCTORAL POSITION is available in CNS Diseases Research to study effects of novel drugs on synaptic transmission. Studies will include using primary neuronal culture and brain slices in conjunction with fluorescence microscopy and indicator dyes. The successful candidate will be part of a multidisciplinary neuroscience group examining the molecular mechanisms of action of novel CNS active compounds. Ph.D. candidates should have a strong interest in the study of synaptic neurotransmission. Experience with fluorescence microscopy and/or primary neuronal culture is preferred. Please forward curriculum vitae, statement of research interests, and names of three references to: Mary Jeannette, The DuPont Merck Pharmaceutical Company, Postdoctoral Program, Position No. 95-RZ, P.O. Box 80353, Wilmington, DE 19880-0353. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION TBP and TAF Structure-Function Studies

An NIH-funded POSTDOCTORAL POSITION is available to examine the role of the TATA-Box Binding Protein, TBP and its associated TAF proteins in transcription initiation complex formation in the *Saccharomyces cerevisiae* system (see *J. Biol. Chem.*, 269:23135, 1994; 269:28335, 1994 and *Genes & Develop.*, 8:2868, 1994). We are currently using a combination of biochemical, genetic and biophysical methods to study the interactions of these transcription factors. Interested parties should send a curriculum vitae and arrange to have three letters of reference sent to: Dr. Tony Weil, Department of Molecular Physiology & Biophysics, Vanderbilt University, School of Medicine, Nashville, TN 37232-0615. FAX: 615-322-7236; Email: weil@ctrvax.vanderbilt.edu. *Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

LIMNOLOGIST/AQUATIC ENTOMOLOGIST AQUATIC TECHNICIAN

Two POSTDOCTORAL, one RESEARCH TECHNICIAN positions are available immediately for a two-year period at Archbold Biological Station. Limnologist to work in West Palm Beach, Florida, on trophic interactions, nutrient cycling, and/or carbon fluxes between the water column and benthos of Lake Okeechobee, Florida. Applicants should have a strong background in biotic interactions or aquatic biogeochemistry. Demonstrated ability with stable isotopes or radioisotopes is required. Aquatic Entomologist to work in central Florida on systematics, community metabolism, and invertebrate community organization for the river margin and a floodplain of the Kissimmee River and the littoral zone of Lake Okeechobee. Demonstrated experience working with aquatic invertebrates is required. Experience in measuring gross primary production and total community respiration given preference. Aquatic Technician to work with aquatic entomologist on community metabolism studies and invertebrate functional group and productivity studies, and selected aquatic vertebrate investigations. Competitive salaries and excellent benefits. Applicants will collaborate closely with researchers at the South Florida Water Management District. Send letter, curriculum vitae, and three letters of recommendation to: Dr. Thomas Bancroft, Archbold Biological Station, P.O. Box 2057, Lake Placid, FL 33862. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN VIROLOGY

Susan Astrin, retroviruses: HIV-1, B-cell transformation; W. Thomas London, HBV: epidemiology, cancer; William Mason, hepadnaviruses: persistence, pathogenesis; HCV: replication; John Pugh, hepadnaviruses: initiation of infection; Christoph Seeger, hepadnaviruses: replication, assembly; HCV: replication; Anna Marie Skalka, retroviruses: integration, splicing, protease; John Taylor, hepatitis delta virus: replication, structure; Philip Tschlis, retroviruses: oncogene activation.

The above virologists at the Fox Chase Cancer Center invite applications from highly motivated candidates seeking further training in virology. Send curriculum vitae and the names and addresses of three references by mail or Email to: Dr. John Taylor, Virology Postdoctoral Training, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111-2497. Email: jm_taylor@w470.fccc.edu. *Fox Chase Cancer Center is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION Transgenic Models of Human Neurodegenerative Disease

Our recent success at producing a transgenic model for human motor neuron disease (*Science*, 264, 1772, 1994) allows us to ask basic questions regarding the mechanism of pathogenesis. You can become a part of this effort if you have experience in: 1) positional cloning, 2) DNA microinjection, or 3) homologous recombination in ES cells. Please send your curriculum vitae, recent reprints, and names of three references to: Dr. Mark Gurney, Department of Cell and Molecular Biology, Northwestern University, 303 East Chicago Avenue, Chicago, IL 60611. *Northwestern University is an Equal Opportunity/Affirmative Action Educator and Employer.*

POSTDOCTORAL POSITION BIOSURFACES

A position is open immediately for a qualified candidate to use AFM and SEM microscopies and various surface analytical techniques for the study of adhesion to human dentin. Contact: Dr. Edward Sacher, Génie physique, Ecole Polytechnique, C.P. 6079 Succ. Centre-ville, Montréal, Québec H3C 3A7 Canada. FAX: 514-340-3218; Email: sacher@phys.polymtl.ca.

POSTDOCTORAL SCHOLAR position available in human cancer research laboratory. Experience required in immunology and molecular biology. Salary negotiable. Send curriculum vitae and letters of recommendation to: Dr. Neal Kay, University of Kentucky Medical Center, Department of Internal Medicine, Division of Hematology/Oncology, CC405 Markey Cancer Center, 800 Rose Street, Lexington, KY 40536-0093 or call 606-323-8980. FAX: 606-257-7715. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION TESTIS ACE AND DEVELOPMENT Department of Pathology Emory University

An NIH-funded position is immediately available to study the biochemistry and molecular biology of angiotensin converting enzyme (ACE) expression by male germ cells. Developing germ cells express large amounts of a unique isozyme of ACE due to the recognition of a small tissue-specific, intragenic promoter (*MCB*, 13:18-27, 1993). The project is a wonderful opportunity to study tissue-specific gene expression. Applicants will be expected to work with graduate students and technicians and to take a substantial role in developing a program investigating the distinctive biochemistry of male germ cells. Applicants should have a Ph.D. or M.D. with experience in molecular biology and an interest in development. Send curriculum vitae, reprints and references to:

Ken Bernstein, M.D.
Room 711 WMB
Emory University
Atlanta, GA 30322

Emory University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY

POSTDOCTORAL POSITION available immediately to work on NIH-funded grants studying the molecular virology of herpes simplex virus latency and pathogenesis. Studies emphasize viral and cellular genes and proteins involved in HSV-1 pathogenesis, and in the establishment and reactivation of HSV-1 latency. Experience in molecular biology, or molecular/classical virology (especially herpes virology) is desirable. Highly competitive salary. Send curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. Steven L. Wechsler, Director, Virology Research Laboratories, Davis Building, Room 5069, Cedars-Sinai Medical Center Research Institute/UCLA School of Medicine, 8700 Beverly Boulevard, Los Angeles, CA 90048-1869. FAX: 310-652-8411.

POSTDOCTORAL POSITIONS are available immediately to study the molecular mechanisms of herpes simplex virus pathogenesis and latency. Candidates with recent Ph.D. degrees are sought to join a well-funded multidisciplinary group examining the interaction of viral and cellular factors in the establishment of, and reactivation from latent infection in a murine model. Experience in one or more of the following is required: protein/DNA interaction, molecular virology, tissue specific gene expression, immunohistochemistry, *in situ* hybridization, *in situ* PCR, neurobiology, or related fields. Submit a curriculum vitae and three letters of reference to: Richard L. Thompson, Ph.D., Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati School of Medicine, P.O. Box 670524, Cincinnati, OH 45267-0524. Telephone: 513-558-0063; FAX: 513-558-8474; Email: THOMPRL@UCBEH.SAN.UC.EDU.

POSTDOCTORAL and RESEARCHER POSITIONS available immediately in structural studies of peptides and proteins. Postdoctoral applicants must have background in one of the following areas: (1) molecular modeling of protein and peptide structure and computer-aided drug design; (2) synthesis and structure of peptides and peptidomimetics. The Researcher position requires a Bachelor's or Master's degree. Knowledge in organic chemistry and peptide synthesis is preferred. Competitive salary and benefits. Send curriculum vitae and arrange for three letters of reference to be sent to: Professor Ziwei Huang, Department of Pharmacology, Jefferson Cancer Institute, Thomas Jefferson University, Philadelphia, PA 19107. FAX: 215-923-2117; Email: zhuang@calvin.jci.tju.edu. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study the mechanism of sensing in gravitropism in *Arabidopsis* roots. Background in plant physiology, genetics, and/or molecular biology required. Send curriculum vitae and three letters of reference to: Fred Sack, Plant Biology, Ohio State University, Columbus, OH 43210. Telephone: 614-292-0896; FAX: 614-292-6345; Email: sack.1@osu.edu.

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

E NVIRONMENTAL BIOTECHNOLOGY MICROBIOLOGISTS

The Environmental Biotechnology Group, DuPont Central Research and Development, invites applications for two Principal Investigator positions in environmental microbiology. We seek candidates who have made outstanding research contributions on the roles of microorganisms as natural catalysts or as agents for treating and recycling the products of human activities. We seek colleagues who will strengthen our leadership position among environmental biotechnology research groups in studying the interactions of microbes with their environment; in using microbes in novel ways for remediation and waste treatment; and in applying microbiology to invent new products and processes for environmental markets.

We require excellent post-doctoral research accomplishments in microbiology, molecular genetics and biochemistry; plus the ability both to collaborate effectively and to lead an independent research program.

We are located in Wilmington, DE, an area that offers an attractive lifestyle with easy access to all the cultural, academic and recreational activities of the Eastern Seaboard. DuPont offers an excellent compensation and benefits package. To be considered, please forward applications, including research interests, curriculum vitae and the names of four references, to: DuPont Human Resources, PSS-0096, Wilmington, DE 19898. An Equal Opportunity Employer.



Central Research
and Development

It's About Challenge.

It's About Discovery.



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Time to spend gaining invaluable clinical experience at King Faisal Specialist Hospital and Research Centre in Riyadh, Saudi Arabia. At this 500-bed tertiary care referral facility, you'll have the chance to share your expertise with an international staff of more than 4,000 professionals.

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And time for yourself. With 50 paid holidays each year, you'll have time to experience one of the most enriching, educational and rewarding experiences of a lifetime.

Research Programmer/Analyst - B.S. degree in a scientific discipline and experience working with biologists or clinicians in a computing capacity. FORTRAN and/or C experience required; additional database experience preferred.

Assistant Scientist-Postdoctoral position for a Molecular Biologist in Virology - Ph.D. and extensive experience

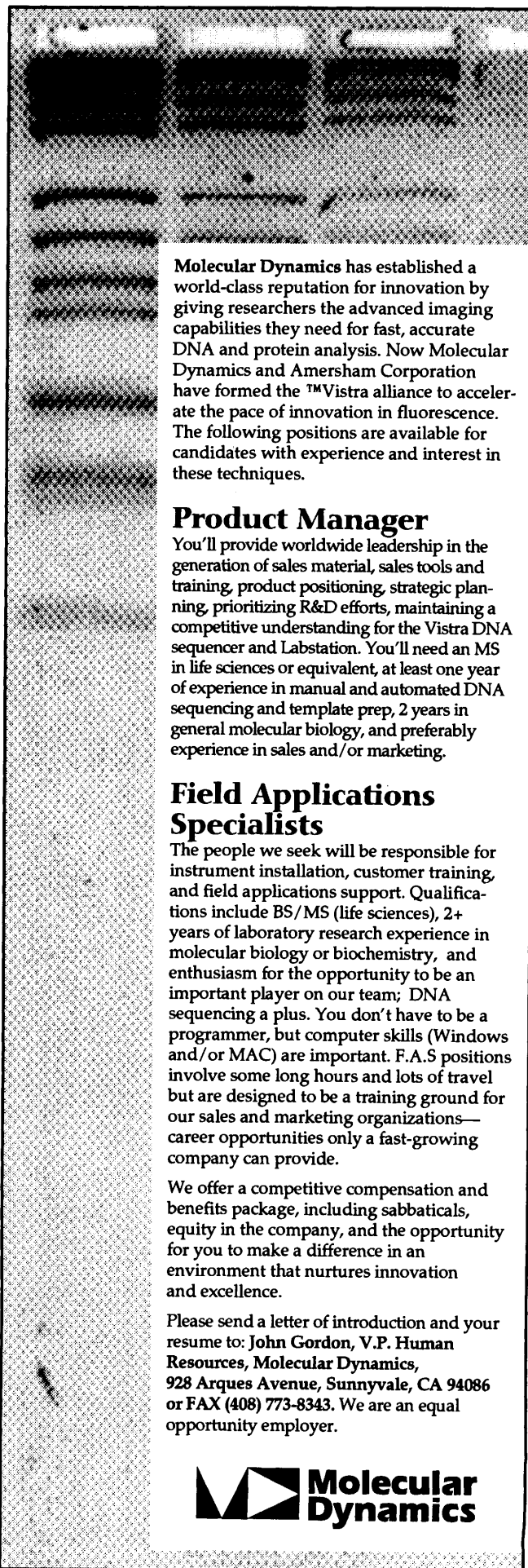
in molecular, virological and immunological method required; must be conversant in writing manuscripts. Abilities and experience should be demonstrated through publications.

Assistant Scientist in Analytical Chemistry or Biochemistry for diagnosis and research of inborn errors of metabolism - Ph.D. and 3 years experience in developing bio-analytical assays using HPLC, GC/MS, LC/MS and kinetic measurements required. Abilities and experience should be demonstrated through publications.

You will receive a full orientation before your adventure begins and after your arrival in Riyadh, free airfare, medical care and free furnished housing. To apply, send resume to: **HCA International, 2515 Park Plaza, Nashville, TN 37203.** Or call **1-800-932-4685.** EOE.



KING FAISAL SPECIALIST HOSPITAL
AND RESEARCH CENTRE
Not an affiliate of Columbia/HCA



Molecular Dynamics has established a world-class reputation for innovation by giving researchers the advanced imaging capabilities they need for fast, accurate DNA and protein analysis. Now Molecular Dynamics and Amersham Corporation have formed the TMVistra alliance to accelerate the pace of innovation in fluorescence. The following positions are available for candidates with experience and interest in these techniques.

Product Manager

You'll provide worldwide leadership in the generation of sales material, sales tools and training, product positioning, strategic planning, prioritizing R&D efforts, maintaining a competitive understanding for the Vistra DNA sequencer and Labstation. You'll need an MS in life sciences or equivalent, at least one year of experience in manual and automated DNA sequencing and template prep, 2 years in general molecular biology, and preferably experience in sales and/or marketing.

Field Applications Specialists

The people we seek will be responsible for instrument installation, customer training, and field applications support. Qualifications include BS/MS (life sciences), 2+ years of laboratory research experience in molecular biology or biochemistry, and enthusiasm for the opportunity to be an important player on our team; DNA sequencing a plus. You don't have to be a programmer, but computer skills (Windows and/or MAC) are important. F.A.S positions involve some long hours and lots of travel but are designed to be a training ground for our sales and marketing organizations—career opportunities only a fast-growing company can provide.

We offer a competitive compensation and benefits package, including sabbaticals, equity in the company, and the opportunity for you to make a difference in an environment that nurtures innovation and excellence.

Please send a letter of introduction and your resume to: **John Gordon, V.P. Human Resources, Molecular Dynamics, 928 Arques Avenue, Sunnyvale, CA 94086** or FAX (408) 773-8343. We are an equal opportunity employer.

POSITIONS OPEN

SANDOZ POSTDOCTORAL FELLOWSHIP IN MOLECULAR TOXICOLOGY

The division of Pathology and Toxicology of the American Health Foundation has an opening for a **POSTDOCTORAL FELLOW** for one or two years to study molecular effects of pharmaceuticals in relation to their potential hazard to humans. The division has a broad-based program on chemical safety assessment involving research on peroxisome proliferators, antioxidants, antiestrogens and quinolone antibiotics. The laboratory utilizes *in vivo*, *in vitro*, biochemical and molecular techniques in these studies. The stipend for the fellowship is \$25,000 or greater, depending upon qualifications. Candidate should be a highly qualified recent graduate with experience in molecular techniques.

The American Health Foundation is a not-for-profit biomedical research organization with a staff of over 200 devoted to disease prevention. The laboratory of the Foundation is located on the campus of the New York Medical College, which is nearby to White Plains and convenient to New York City.

Inquiries should be addressed to:

Gary M. Williams, M.D.
Director of Medical Sciences
American Health Foundation
1 Dana Road
Valhalla, NY 10595

An Equal Opportunity Employer/Minorities/Female/Disabled/Veterans/ADA.

RESEARCH POSTDOCTORAL FELLOWSHIP Yale University School of Medicine

Applications are invited for **POSTDOCTORAL FELLOWSHIPS** in the Section of Pulmonary and Critical Care Medicine of the Department of Internal Medicine at Yale University School of Medicine. Outstanding candidates with a Ph.D. or M.D. degree will be considered. Experience in molecular biology and cell biology is essential. Experience in cytokine biology, *in vivo* animal modeling, transgenic gene expression and virology is highly desirable. The chosen candidate(s) will work on ongoing research projects focused on molecular and cell biology of cytokines, viruses and asthma. Please respond with curriculum vitae and three letters of recommendation to: **Jack A. Elias, M.D., Professor of Medicine, Chief of Pulmonary and Critical Care Medicine, Yale University School of Medicine, Section of Pulmonary and Critical Care Medicine, Department of Internal Medicine, 333 Cedar Street, 105 LCI, New Haven, CT 06520-8057. Telephone: 203-785-4163; FAX: 203-785-3826.** *Yale University School of Medicine is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available for a recent Ph.D. trained in physical or biological oceanography, to participate in the Joint Global Ocean Flux Arabian Sea project sponsored by the National Science Foundation. The goal is to understand the seasonal variations in the biological and biogeochemical cycles under the strong monsoonal forcing. Data from Acoustic Doppler Current Profilers (ADCPs) will be used to describe seasonal and spatial variations in upper ocean currents and will be integrated with moored and ship-based observations from an 18-month program. Familiarity with ADCPs and processing large quantities of data is preferred.

Applicants should send a curriculum vitae and the names and addresses of three references to: **Dr. Charles N. Flagg, Building 318, Department of Applied Science, Brookhaven National Laboratory, Associated Universities, Inc., P.O. Box 5000, Upton, Long Island, NY 11973-5000.** *Equal Opportunity Employer/Minorities/Female/Disabled/Veterans.*

POSTDOCTORAL POSITION available immediately to study the role of POU/homeodomain genes in the development of the embryonic mouse CNS. Relevant techniques include *in situ* hybridization, transgenic mice and embryonic stem cell technology. Experience in molecular biology required. Please send cover letter, curriculum vitae and the addresses and telephone numbers of three references to: **E. Bryan Crenshaw, Ph.D., Department of Neuroscience, 109 Johnson Pavilion, The University of Pennsylvania, 36th and Hamilton Walk, Philadelphia, PA 19104-6074. Telephone: 215-898-1998; FAX: 215-573-2015; Email: crenshaw@mail.med.upenn.edu.**

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP Molecular Genetics of Folate Transport

This research program prepares trainees to explore the mechanisms of transport and metabolism of antineoplastic agents at the biochemical and molecular levels. The focus is on antifolates and their role in cancer treatment and on natural folates and the role of deficiency states in mutagenesis and carcinogenesis. Training is within the context of a collaborating group of faculty in the Developmental Therapeutics Program of the Massey Cancer Center. Trainees are introduced to concepts in structure-based drug design in an associated program that encompasses NMR, X-ray crystallography and molecular modeling. Trainees have access to a full range of Massey Cancer Center Shared Laboratory resources. There is an established track record of successful trainee placement in positions in academics, government or research units of the pharmaceutical industry. Trainees participate in the development of grants as part of the training experience and have an excellent record of peer-reviewed funding.

The program is funded through a Postdoctoral Training Grant from NCI. Starting stipend is \$25,000 per year. Contact: **Dr. I. David Goldman, Director, Massey Cancer Center, Medical College of Virginia, Richmond, VA 23298-0230.** *Medical College of Virginia/Virginia Commonwealth University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

FDA, Center for Biologics Evaluation and Research, Office of Vaccines Research and Review, Division of Bacterial Products, Laboratory of Bacterial Toxins has immediate openings for two **POSTDOCTORAL FELLOWS** (one senior, one junior) to conduct research on bacterial toxins, toxoids, peptide and vectored vaccines, or immune therapy. Current research areas include mechanism and structure-function studies of tetanus and diphtheria toxins. Candidates with research interests in these and related areas are encouraged to apply; senior position may lead to tenure-track appointment. Candidates must have completed all requirements from an accredited institution for a doctoral degree. Candidates must be either U.S. citizens or resident aliens eligible for citizenship within four years. Laboratories are located on the National Institutes of Health campus in Bethesda, Maryland. Salary range for candidates is from \$28,000 to \$62,293 per annum. Candidates should send a current curriculum vitae, bibliography, statement of research interest, transcripts, and names of three references to: **FDA/Center for Biologics Evaluation & Research, 1401 Rockville Pike, HFM-50 (146), Rockville, MD 20852-1448.** *FDA is an Equal Opportunity Employer and has a smoke-free environment.*

CELLULAR/MOLECULAR PARASITOLOGY UNIVERSITY OF WISCONSIN-MADISON

NIH-funded **PRE- and POSTDOCTORAL FELLOWSHIPS** available for advanced studies in parasitology. Training program includes a variety of course offerings in parasitology/tropical diseases, and exciting opportunities for research training in immunoparasitology, molecular parasitology, vector biology, parasite biochemistry, neurobiology and physiology. For further information contact: **Timothy P. Yoshino, Director, Cellular and Molecular Parasitology Training Program, Department of Pathobiological Sciences, University of Wisconsin-Madison, 2015 Linden Drive West, Madison, WI 53706.** *Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. U.S. citizenship or permanent residency required.*

RESEARCH FELLOWSHIPS Investigative and Molecular Dermatology

The Skin Diseases Research Center at Case Western Reserve University (CWRU) offers a **POSTDOCTORAL PROGRAM** for those with an M.D. or Ph.D. degree contemplating an academic career in dermatological research. Special expertise and research areas of our program faculty include: immunodermatology, molecular and cellular biology, photodermatology and photomedicine, skin pharmacology and skin carcinogenesis and dermatologic epidemiology. This program is funded by an NIH training grant. For more information, send curriculum vitae and outline of career plans to: **Hasan Mukhtar, Ph.D., Professor and Research Director, Department of Dermatology, CWRU, 2074 Abington Road, Cleveland, OH 44106. Telephone: 216-368-1127.** *CWRU is an Affirmative Action/Equal Opportunity Employer. Candidates must be U.S. citizens or permanent residents.*

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP

Available Immediately: **POSTDOCTORAL FELLOWSHIP** for Ph.D. or M.D. to participate in NIH-sponsored research on the role of polypeptide growth factors in cerebral ischemia. Experience in experimental models of brain ischemia and/or molecular biology techniques desirable. Interested candidates should send curriculum vitae, a brief statement of research interests and names and telephone numbers of three references to: **Seth Finklestein, M.D., CNS Growth Factor Research Laboratory, Massachusetts General Hospital/Harvard Medical School, MGH East, 149 13th Street, 6th Floor, Charlestown, MA 02129.**

POSTDOCTORAL FELLOWSHIP available immediately at the Johns Hopkins University School of Medicine in laboratory that identified loss of imprinting in cancer (*Nature*, 362:747-749, 1993; *Nature Genetics*, 7:433-439, 1994), as well as novel strategies to identify tumor suppressor genes (*Science*, 260:361-364, 1993). Please send curriculum vitae, a description of research experience and goals, and names and addresses of three references to: **Dr. Andrew P. Feinberg, Johns Hopkins University School of Medicine, 1064 Ross Building, 720 Rutland Avenue, Baltimore, MD 21205.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW position: Available immediately in drug metabolism and clinical pharmacology. *In vitro* and *in vivo* studies of human drug metabolism ongoing. Requires experience in drug metabolism, biochemical techniques, HPLC and computer software for system operation and data analysis. Send curriculum vitae and names and addresses of three references to: **Louis R. Cantilena, M.D., Ph.D., USUHS, Division of Clinical Pharmacology, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** *The Uniformed Services University of the Health Sciences is an Equal Employment Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH FELLOW

Available Immediately: Postdoctoral position to work on a project examining the effect of aging and dietary intervention on gut-associated immunity. Ph.D. in Immunology or related fields is required. Prior knowledge or experience with GI immunity and oral vaccination is highly desirable. Interested candidate should send résumé and names and telephone numbers of three references to: **Dr. Simin Nikbin Meydani, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, 711 Washington Street, Boston, MA 02111.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE POSITION available immediately to investigate (1) the metabolism of polynuclear aromatic hydrocarbons by bacteria, and (2) characterization of metabolites. Ph.D. in microbiology, microbial biochemistry, or bioorganic chemistry required. Experience in product isolation and characterization desirable. Please send résumé and names of three references to: **Dr. H. Sikka, Laboratory of Environmental Toxicology and Chemistry, Science 261, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222. Telephone: 716-878-5422; FAX: 716-878-5400.**

RESEARCH ASSOCIATE. A Research Associate position is available immediately to study the molecular biology of polyadenylation in mammalian systems. A thorough knowledge of the techniques of molecular biology as well as the interactions of proteins with nucleic acids is required. The position is fully funded by a newly renewed NIH grant. Send curriculum vitae and letters of recommendation to: **Dr. James C. Alwine, University of Pennsylvania, 560 Clinical Research Building, 415 Curie Boulevard, Philadelphia, PA 19104-6142. FAX: 215-573-3888.** *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE

A position is available for a candidate with a Ph.D. and at least two years of postdoctoral experience in the field of molecular biology and biochemistry. Knowledge of hormone-receptor interaction and use of expression vectors and DNA techniques are required. Salary negotiable depending on experience. Send résumé, attention: **Dr. H. Salari, Jack Bell Research Centre (UBC), 2660 Oak Street, Vancouver, B.C. V6H 3Z6 Canada.**



The Cleveland Clinic Foundation

Postdoctoral Fellowships in Biomedical Image Processing

Postdoctoral positions are available in the Biomedical Image Processing Laboratory of the Department of Biomedical Engineering at The Cleveland Clinic Foundation. The Biomedical Engineering Image Processing group consists of a multi-disciplinary team of research scientists and physicians. State-of-the-art image processing techniques are developed and applied to a variety of clinically relevant issues. Program development is performed on a network of Sun and Silicon Graphics workstations. Clinical research is carried out with physicians in a wide range of disciplines, and research opportunities are available in areas such as:

- Magnetic resonance imaging of multiple sclerosis lesions
- Intravascular ultrasound of atherosclerosis
- Classification of malignant breast tumors from mammogram images
- Analysis of local myocardial mechanics using magnetic resonance imaging
- Quantification of molecular and cellular markers
- Three-dimensional reconstruction and rendering of medical images

Applicants should be recent Ph.D. graduates with significant experience in image processing and computer science. Knowledge of structured programming and basic biomedical sciences is required. Interested applicants should send a curriculum vitae and a list of references to:

J. Fredrick Cornhill, D.Phil.
Chairman, Biomedical Engineering/Wb3
The Cleveland Clinic Foundation
9500 Euclid Avenue
Cleveland, OH 44195



FACULTY POSITION IN NMR SPECTROSCOPY

The University of Texas Medical Branch • Galveston, Texas

Continuing development of Structural Biology at UTMB leads to an additional junior, tenure-track faculty position in the area of application of Nuclear Magnetic Resonance (NMR) to solving structures of biological macromolecules. The University of Texas Medical Branch has made a major commitment to create a strong Structural Biology Program on campus to enhance our existing capabilities. The NMR facility, directed by Dr. David Gorenstein, consists of new 400 and 600 MHz Varian spectrometers with a 750 MHz instrument contracted for delivery in January 1995. Endowed foundations, the Medical Branch and NIH funding have provided excellent equipment, a newly renovated facility, and ample additional space in support of Structural Biology. The Unit consists not only of NMR spectroscopists, but also other disciplines relevant to Structural Biology, including computational chemistry and x-ray crystallography.

The successful candidate must have outstanding potential for independent research and record in the field of NMR; will be expected to attract funding from national agencies and to fully participate in graduate education at the departmental level. Affiliation with the Sealy Center for Molecular Science or other relevant academic departments will be available.

Applications should include a complete curriculum vitae, a summary of research interests and names and addresses of at least three references. Review of applications will continue until the position is filled. Applications should be addressed to:

Dr. James C. Lee
Structural Biology Search Committee
Department of Human Biological Chemistry and Genetics
and
The Sealy Center for Molecular Science
University of Texas Medical Branch • Galveston, Texas 77555-1055

UTMB is an equal opportunity affirmative action employer M/F/D/V. UTMB is a smoke-free, drug-free workplace. UTMB hires only individuals authorized to work in the United States.

THE UNIVERSITY OF CALIFORNIA, SAN DIEGO DEPARTMENT OF BIOLOGY

FACULTY POSITION IN IMMUNOLOGY

The Department of Biology, University of California, San Diego invites applications for a position in the general area of Immunology. The level of the appointment is unspecified; we encourage applications at the level of a tenure-track Assistant Professor through a senior, tenured Professor. The position is available as early as fall 1995. Salary will be commensurate with level of appointment and based on the UC published salary scale. Possible areas of interest include: the cell biology of signaling induced by cytokines and adhesion molecules, regulation of gene expression, leukocyte development and function, protein trafficking related to receptor assembly or antigen presentation, and cellular interactions in immunity. Outstanding candidates in all areas related to immunology will be considered. The successful candidate is expected to have an innovative research program that utilizes contemporary techniques in biochemistry, genetics, and cell biology. Resources will be provided for the appointee to set up a competitive laboratory equipped to carry out the research of his or her choosing. A Ph.D., demonstration of scholarly work, and an established research program appropriate for the appointment level are required. Please submit a curriculum vitae with phone and fax numbers, a statement of professional goals and research interests, and the names, addresses, phone and fax numbers of five references by March 31, 1995 to:

Immunology Search Committee
Department of Biology
9500 Gilman Dr.

University of California, San Diego
La Jolla, CA 92093-0346

The University of California, San Diego is an equal opportunity/affirmative action employer. We strongly encourage women and minorities to apply.

DEAN OF THE COLLEGE OF ENGINEERING

Applications are invited for the position of Dean of the College of Engineering at the University of Massachusetts Lowell. The appointment will commence June 1, 1995 or as soon as possible thereafter.

The University

The James B. Francis College of Engineering at the University of Massachusetts Lowell traces its origins to 1895, with the founding of the Lowell Textile School. Through 100 years of growth and development, the fundamental purpose of the school has remained constant; to prepare men and women for their entrance into the engineering profession, providing the leading industries in our region with skilled technical professionals, and to foster new technologies and disseminate them to industry.

The College

The College consists presently of seven departments: Chemical and Nuclear, Civil, Electrical, Engineering Technology, Mechanical, Plastics, and Work Environment. It is also home to several interdisciplinary research centers and laboratories and will have substantial connections to the newly created Institute for Massachusetts Partnering and Commercialization of Technology (IMPACT). The College has several unique strengths, including plastics engineering and environmental/work environment programs.

The Position

The primary role of the Dean of the College is to foster excellence in teaching, research and service by example and through the exercise of vision and leadership. He or she must demonstrate a commitment to quality undergraduate and graduate programs and a record of developing, planning and evaluating these programs in accordance with ABET guidelines. In addition, he or she will also contribute to the development of new programs as part of an engineering-applied science-management continuum and to initiatives designed to recruit and retain minorities and women. To expand the College's already strong relationship with industry, the Dean must demonstrate the ability to represent the College effectively in interactions with the public and private sectors and to articulate the College's goals and plans to a variety of constituencies. Ultimately, the Dean will guide the College toward meeting the University's goal: that each department in the College be ranked in the top quartile for engineering schools.

Qualifications

The Dean must have a distinguished academic and research record and experience and knowledge of the national research and funding environment, as well as a record of excellence in academic administration.

Salary

The salary is highly competitive with excellent fringe benefits.

The Application

Screening of applicants will begin mid-January and continue until the position is filled. The application should consist of: i) a letter of application including discussion of educational and administrative philosophy and vision; ii) a curriculum vitae; iii) official copy of doctoral transcript; iv) a list of 6 references, (names, addresses and telephone numbers).

Applications must be addressed to: **Dr. Janice M. Stecchi, Co-Chair, Search Committee for Dean of College of Engineering, College of Health Professions, University of Massachusetts Lowell, One University Avenue, Lowell, MA 01854; Tel: (508) 934-4461; FAX: (508) 934-3006; Email: StecchiJ@woods.uml.edu** The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action, Title IX, H/V, ADA 1990 employer.

ASSOCIATE DIRECTOR MATTHAEI BOTANICAL GARDENS

University of Michigan

The University of Michigan's Matthaei Botanical Gardens invites applications for the position of **Associate Director**. The Associate Director provides the ongoing administrative supervision to the programs of education, research and public outreach. Preference will be given to candidates with demonstrated management skills including supervision of budgets and personnel, an understanding of the business operations of a research university, and advanced training in the plant sciences; Ph.D. preferred. A familiarity with issues of biodiversity, conservation and horticulture is necessary. The position is available immediately and applications will be accepted until the position is filled. Applicants should send a curriculum vitae, statement of interest, and names and telephone numbers of four references to: **Dr. J. A. Teeri, Department of Biology, Natural Science Building, University of Michigan, Ann Arbor, MI 48109.** The University of Michigan is an Affirmative Action/Equal Opportunity Employer.



The University of Michigan
Human Resources / Affirmative Action

Postdoctoral Fellowships

The UNC Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill will have openings in 1995 for persons completing graduate studies to train with excellent investigators in basic research in tumor virology, molecular carcinogenesis, molecular therapeutics, cancer cell biology, genetics, and tumor immunology. Training is available in recombinant DNA technology, gene expression, DNA replication, mutagenesis, regulation of cellular proliferation, growth factors, molecular immunology, molecular genetics of cancer, and combined programs. Unique training resources and core facilities are supported by the NCI-designated UNC Lineberger Comprehensive Cancer Center.

Preceptors are: Steven Bachenheimer, Albert Baldwin, Keith Burridge, Stephen Chaney, David Clemmons, Marila Cordeiro-Stone, Channing Der, H. Shelton Earp, Jeffrey Frelinger, Frank French, Jack Griffith, Stephen Haskill, Geoffrey Haughton, Brian Herman, Clyde Hutchinson III, Eng-Shang Huang, Kenneth Jacobson, Rudolph Juliano, David Kaufman, Shannon Kenney, Ryszard Kole, Steven Leadon, David Lee, Edison Liu, Patricia Maness-Tidwell, William Marzluff, Beverly Mitchell, Joseph Pagano, Nancy Raab-Traub, James Raleigh, R. Jude Samulski, Aziz Sancar, Ronald Swanstrom, Ronald Thurman, Jenny Ting, Michael Topal, Terry Van Dyke, Jean-Michel Vos, Elizabeth Wilson, Bernard Weissman, and Yue Xiong.

Candidates must be U.S. citizens or permanent residents. To send for an informational brochure or to apply, with curriculum vitae, three letters of recommendation, a statement of research interests and graduate school records, write to:

Joseph S. Pagano, M.D.
CB# 7295

UNC Lineberger Comprehensive Cancer Center
School of Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7295

UNC's Comprehensive Cancer Center is an Affirmative Action/Equal Opportunity Employer. Minority applicants are encouraged voluntarily to identify themselves.

The Extracellular Matrix in Invasion, Metastasis, and Angiogenesis

Friday,
March 10, 1995

MAYER AUDITORIUM
University of Southern California Health Sciences Campus

Program

Welcome
PETER A. JONES, PHD
University of Southern California

Introduction
YVES A. DE CLERCK, MD
University of Southern California

ERKKI RUOSLAHTI, MD
La Jolla Cancer Research Foundation
Integrins as Signaling Molecules
in Cell Proliferation, Migration
and Apoptosis

DAVID A. CHERESH, PHD
The Scripps Research Institute
Role of Integrin $\alpha_v\beta_3$ in
Angiogenesis of Human Tumors

LYNN M. MATRISIAN, PHD
Vanderbilt University
Metalloproteinases in
Tumor Progression

BONNIE F. SLOANE, PHD
Wayne State University
Cathepsins in Cellular Invasion

JAMES P. QUIGLEY, PHD
State University of New York at Stony Brook
The Plasminogen Activator System
in Tumor Invasion and Metastasis

YVES A. DE CLERCK, MD
University of Southern California
Tissue Inhibitors of
Metalloproteinases in Tumor
Invasion and Metastasis

ZENA WERB, PHD
University of California, San Francisco
Proteolytic Degradation of the
Extracellular Matrix During
Physiological Invasion

DANIEL B. RIFKIN, PHD
New York University Medical Center
Interplay Between Growth
Factors, Matrix and Proteases
in Angiogenesis

HELENE SAGE, PHD
University of Washington
Positive and Negative Regulators of
Angiogenesis: Sparc and Angiostatin

Symposium organized by USC/Amgen Inc.
No registration fee • Information: (213) 746-0816

The Foundation for Advanced Cancer Studies and
Cold Spring Harbor Laboratory will cosponsor
an exciting new meeting...

Cancer Genetics and Tumor Suppressor Genes

June 14-17, 1995
Hood College
Frederick, Maryland

Organized by **Stephen H. Friend**
Harvard Medical School

Associate Organizers **E Fearon, E Harlow, B Ponder**
G Vande Woude, B Vogelstein

Emphasis will be placed on cancer genetics and tumor suppressor genes. Graduate students and postdoctoral fellows are encouraged to attend. The format will consist of oral and poster presentations with overviews given by distinguished leaders in the field. This meeting presents an exciting new forum for young investigators to present and discuss their research - please plan to attend.

Registration (including housing and meals) is **\$550.00 US**.
Abstract submittal deadline is April 7, 1995.

For details, please contact: **Margaret L. Fanning**
Conference Office, FACS
P.O. Box 249 • 12120 Main Street
Libertytown, Maryland 21762
301-898-9266 • FAX 301-898-9173

NEW ENGLAND BIOLABS

New England Biolabs, Inc., a world leader in the production of restriction endonucleases and other related products for the recombinant DNA field, is seeking applicants for:

Protein Engineering - A Postdoctoral level scientist to study the structure/function of restriction enzymes, including mutagenesis of their DNA recognition elements and the active site. **Group Leader: Paul Riggs, Ph.D.**

Molecular Biology or Biochemistry - A Postdoctoral level scientist for experiments involving cloning and high levels of expression and mutagenesis of restriction and modification enzymes. **Group Leader: Donald Nwankwo, Ph.D.**

Program Coordinator, Marketing Department - An individual educated in some aspect of the life sciences to manage our rapidly growing national freezer program. Candidate should be a team player, comfortable with Macintosh based computer systems, be able to maintain an integrated database, be dedicated to excellence in customer service, be an effective, enthusiastic communicator with a positive attitude and act as a liaison between the Marketing Dept. and the Customer Service Group. Some travel will be required. **Group Leader: Peter Nathan, Ph.D.**

Interested candidates should submit a resume with three references to the respective group leader.

In addition to a competitive salary, New England Biolabs offers a very generous fringe benefits package. Attendance at meetings, publication of research results and open communication with others are encouraged.

New England Biolabs, Inc.

32 Tozer Road

Beverly, MA 01915-5510

An Equal Opportunity Employer



NEW ENGLAND

Biolabs

Help Deliver A New Era In Pharmaceuticals.

Since 1888, Abbott has been at the forefront of discovery in the health care industry. Last year alone, we committed \$881 million to R&D to answer some of today's most important scientific questions. As we continue our work, our Pharmaceuticals Products Division has the following outstanding opportunity available.

Pharmacology Research Associate

You will perform *in vitro* metabolism studies and elementary pharmacokinetic studies on rats, assist in small animal surgery, and analyze metabolism and pharmacokinetic samples by HPLC. You will also process data on a PC and write study reports for project teams.

We prefer an MS in Biological Science or a BS plus 2+ years of post-graduate experience. We also require background in metabolism or biochemistry.

Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban area, approximately 30 miles north of Chicago. For confidential consideration, please send a resume and salary history to: **Alison Burke, D-583, AP6B, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064, Job #HN60029.** Abbott is an Affirmative Action/Smoke-Free Employer.

ABBOTT LABORATORIES



Quality
Health Care
Worldwide
Since 1888

Experience The Abbott Edge.

AUBURN UNIVERSITY

Applications and nominations are invited for the **HEAD, DEPARTMENT OF ANIMAL AND DAIRY SCIENCES**, whose role is to: • Provide visionary and effective leadership for teaching, research and extension programs in a diverse department consisting of 30 faculty and 300 undergraduate and graduate students; • Recruit and evaluate personnel, provide leadership for funding initiatives, and formulate budgets; • Facilitate teaching and research programs conducted on campus and at the nearby meat laboratory and beef, swine, horse and dairy units, as well as at research facilities on nine substations located throughout the state; • Provide dynamic leadership and support for contemporary agricultural extension programs; and • Develop and maintain collaborative efforts with other departments and institutes across campus as well as commodity and consumer groups, agricultural industry personnel, governmental agencies and other educational institutions. Candidates must have an earned doctoral degree in Animal or Dairy Science, or a closely related discipline, and an outstanding professional record; a demonstrated commitment to excellence and an awareness of emerging trends in teaching, basic and applied research, and extension programs; excellent communication, leadership and organizational skills; and must be able to work effectively with students, faculty, staff, administrative officials, commodity groups, industry leaders and the public. Applicants should submit: (1) a letter of interest including a description of their administrative philosophy and a visionary statement on the role of a contemporary animal science department in the 21st century; (2) a current vita; and (3) the names, addresses and phone numbers of at least five professional references to Dr. Russell B. Muntifering, Search Committee Chair, Alabama Agricultural Experiment Station, 310 Samford Hall, Auburn University AL 36849-5403; Phone: 334/844-4768; FAX: 334/844-5511; e-mail: rmuntife@ag.auburn.edu. Screening of applicants will begin March 1, 1995, and will continue until the successful candidate is identified. Preferred starting date of August 1, 1995 (negotiable).

Auburn University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.

DEVELOPMENTAL ENDOCRINOLOGIST/REPRODUCTIVE PHYSIOLOGIST

(Reproductive and Developmental Toxicology)

The Chemical Industry Institute of Toxicology (CIIT) is seeking a Scientist to join the research staff in an emerging program to investigate the potential biological effects of chemicals on endocrine homeostasis. Qualified individuals need to have a doctorate degree in a research area with emphasis on reproductive and/or developmental endocrinology with at least three years of postdoctoral research experience. It is also advantageous to have research interests in the general area of receptor mediated events in hormonally controlled processes using contemporary techniques.

Ongoing research programs at CIIT include carcinogenesis, respiratory toxicology, neuro- and developmental toxicology, with emphasis on mechanistic studies using an interdisciplinary research approach directed towards a better understanding of human health risks posed by exposure to chemicals. CIIT has a well-established postdoctoral training program, and there are excellent opportunities for interaction with nearby outstanding universities and federal government laboratories.

CIIT is an independent, not-for-profit research institute. The institute is located in Research Triangle Park, NC, which offers many cultural and recreational activities. We offer competitive salary and benefits, and a stimulating work environment. Interested applicants should submit a curriculum vitae with the names of three professional references, representative reprints and summary of research interests to: Human Resources Manager, CIIT, P.O. Box 12137, Research Triangle Park, NC 27709.



CIIT is an Equal Opportunity Employer (M/F/D/V)



IMMUNOLOGIST

The Immunobiology Division of the Department of Pathology and Laboratory Medicine seeks an immunologist for the position of Assistant Professor in the tenure track. Candidates should possess a Ph.D. and/or M.D. degree, and have demonstrated strong research potential in molecular and/or cellular immunology. The successful candidate will be expected to generate a vigorous research program and participate in graduate/medical student training. Potential for clinical service exists for appropriately qualified candidates. Interested individuals should send their curriculum vitae, a summary of research interests and the names of three references to:



Mark I. Greene, M.D. Ph.D.,
Department of Pathology &
Laboratory Medicine,
University of Pennsylvania
School of Medicine,
252 John Morgan Bldg.,
3620 Hamilton Walk,
Philadelphia, PA 19104-6082.

The University of Pennsylvania is an equal
opportunity/affirmative action employer.
Women and minorities are encouraged to apply.

GRADUATE FELLOWSHIPS CENTER FOR THE STUDY OF EVOLUTION AND THE ORIGIN OF LIFE UCLA

ORIGIN OF THE UNIVERSE...
FORMATION OF THE EARTH...
BEGINNINGS OF LIFE...
EVOLUTION OF THE BIOSPHERE...
ADVENT OF *HOMO SAPIENS*...

CSEOL invites applications for five graduate fellowships for 1995-96. *In addition* to support provided Fellows by UCLA departments, CSEOL will grant each Fellow a stipend of \$5,000 per year, for each of the first two years of graduate study, with no teaching or other duties. Stipends may be used for any purpose the Fellow deems appropriate -- travel, lodging, attendance at scientific meetings, purchase of books, computers, research equipment -- for any purpose, without restriction. Fellows are included in a select group of graduate students invited to interact with Center faculty in a weekly dinner/seminar/discussion series. Applicants should be planning to carry out doctoral research under the direction of a CSEOL faculty member in a subject area relating to **virtually any aspect of evolution -- of the cosmos, of the solar system, of Earth, of the environment, of life, of humans.** Areas of particular interest for 1995-96 include (1) planetary evolution and exobiology; (2) origin and early evolution of life; and (3) biochemical evolution and molecular phylogeny. Faculty are members of the **UCLA Departments of Anthropology, Astronomy, Atmospheric Sciences, Biology, Chemistry & Biochemistry, Computer Science, Earth & Space Sciences, Economics, Geography, History, Microbiology, Philosophy, psychology, and Sociology; the School of Medicine; the School of Public Health; the Institute of Geophysics and Planetary Physics; and the Molecular Biology Institute.** Fellowship applicants must apply (preferably, by 17 March 1995) both to an appropriate academic department and to CSEOL. For application forms and a list of CSEOL members, contact:

CSEOL Fellows Committee
Geology Building, Room 5687
University of California, Los Angeles
Los Angeles, CA 9005-1567
Telephone: (310) 825-1170
FAX: (310) 825-0097

MRC Group in Protein Structure and Function, Faculty Position in Protein Chemistry

The Medical Research Council of Canada Group in Protein Structure and Function at the University of Alberta invites applications for membership in the Group and an associated Faculty position in the Department of Biochemistry. Applicants should have a strong background in protein chemistry and will be expected to develop a research project that will complement and contribute to the overall research efforts in the Group. Some areas currently under investigation by the Group include: chemistry and structure of contractile proteins of both muscle and non-muscle systems and the molecular mechanism by which calcium triggers muscle contraction; structure-function relationships of calcium binding proteins; mechanistic studies of seryl and aspartyl proteinases, and of lipases, thioesterases, and esterases; and protein phosphatases as intracellular targets for tumor promoting toxins. Preference in the selection process will be given to those individuals who have a background in physical biochemistry with particular emphasis on spectroscopic and hydrodynamic approaches for the investigation of structure-function relationships in protein systems. Appointments can be made at any level from Assistant to Full Professor depending upon the qualifications. Current salaries for Assistant Professor (Min. \$39,230); Associate Professor (Min. \$48,572); and Professor (Min. \$60,355).

The MRC Group in Protein Structure and Function was established in 1974 and has undergone three successful renewals. The major techniques of protein science used by the group members include: hydrodynamic and spectroscopic methods, nuclear magnetic resonance, spectroscopy, X-ray crystallography, solid phase synthesis of peptides, recombinant DNA technology and protein engineering. There is also a close association of the MRC Group with the Alberta node of the Protein Engineering Network Centre of Excellence (PENCE)

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The deadline for receipt of applications is March 30, 1995. Applicants should forward curriculum vitae, list of publications and names of three referees as soon as possible to:

Professor Brian D. Sykes
Department of Biochemistry
University of Alberta
Edmonton, Alberta, Canada T6G 2H7

The University of Alberta is committed to the principle of equity in employment. The University encourages applications from aboriginal persons, disabled persons, members of visible minorities and women.

Professor/Chair Department of Physiology & Biophysics

The University of Alabama at Birmingham Schools of Medicine and Dentistry invite applications and nominations for a tenured professorial position as **CHAIR** of the Department of Physiology and Biophysics. The person filling this position will assume the leadership of a strong, well-funded, nationally recognized department with major areas of expertise including the fields of membrane transport, neuroendocrinology, and cardiovascular physiology. The **CHAIR** will have the opportunity to expand the department in new directions. The department presently includes 18 full-time faculty members and a well-established graduate program with 30 trainees.

The applicant must have Ph.D., M.D. or equivalent degree, be internationally recognized for research in any aspect of physiology, have a commitment to graduate and medical education, and have a record of demonstrated leadership in administrative activities. The successful candidate is expected to be an established scientist with a strong on-going, independent, and well-funded research program. Interested applicants should submit a curriculum vitae including the names of three references by **April 1, 1995** to: Amy W. Thompson, Director of Administrative Services, University of Alabama School of Medicine, MEB 310F, University Station, Birmingham, Alabama 35294-3293.

An Affirmative Action/
Equal Opportunity Employer.

SCIENCE Special Editorial Focus

10 March 1995

Special Issue: Molecular Biology: Cellular Regulation I

The 10 March issue offers three special advertising opportunities!

- Special molecular biology cover story.
- Bonus distribution to scientists attending the American Association of Cancer Research meeting, 19-21 March in Toronto, Canada.
- Bonus distribution to USGEB (Union of Swiss Societies of Experimental Biology), 30-31 March in Fribourg, Switzerland.

**Recruitment Advertising
Space Reservation Deadline:
21 February**

To advertise, call:
In the U.S., Janis Crowley
phone (212) 496-7704,
fax (202) 682-0816.

In Europe, Gordon Clark
phone (44) 01223 302067,
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SCIENCE

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EXPERIMENTAL PATHOLOGY

Research Scientist

This position will develop appropriate in vivo models to guide the pre-clinical development of novel therapeutics. Duties also include preparation for FDA filings. Candidates must have a Ph.D. or equivalent background in Biology, Pathology, Tumor Biology, Growth Factors or a related field, and 2-3 years' post-doctoral experience. Previous industry experience and a background in gastrointestinal biology are also desired. (Job Code: OXP-SC-2234)

Pathologist

This position will provide anatomic pathology interpretive support to ongoing discovery projects, including the evaluation of genetically-engineered models (transgenics, gene knockouts, etc.) or models treated with potential, novel therapeutics (predominantly recombinant proteins). In addition, this individual will establish or maintain models appropriate to the preclinical development of selected molecules, and will be an essential member of multidisciplinary teams that are oriented toward IND filings. Requires a D.V.M./Ph.D., M.D./Ph.D. or M.D. with specialization in pathology, and 2-3 years of post-training experience. Industry experience is a plus. (Job Code: OXP-SC-2175)

STEM CELL BIOLOGY

Post-Doctoral Fellow

The Department of Stem Cell Biology currently has a post-doctoral fellowship available for individuals interested in the fields of hematology and/or developmental biology. Responsibilities include the study of hematopoietic stem cell growth and the discovery of novel cytokines involved in this process. Qualified applicants must have, or will soon complete, a Ph.D. in Hematology, Developmental Biology, or a related field. Experience in cell biology, FACS analysis, and cell sorting is necessary. Additional skills in molecular biology/protein purification are desirable. (Job Code: OXP-SC-2200)

IN SITU ANALYSIS

Research Associate

We currently seek a BS level Research Associate to perform RNA expression studies using Northern and in situ analysis in order to support the analysis of expression patterns for novel genes in a variety of tissues (i.e. transgenic and knockout mice). Ideal candidates will have 1-2 years' experience with all aspects of in situ analysis (preparation and sectioning of paraffin-embedded and/or cryopreserved tissues and preparation of radiolabelled and/or hapten-labelled riboprobes). A Master's degree and experience with immunohistochemistry, RNase protection assays, whole-mount in situ techniques, and RT-PCR are preferred. (Job Code: OXP-SC-2152)

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center, and three weeks' vacation. Please mail your resume/c.v. to: Amgen Inc., Staffing, Job Code: (see above), Amgen Center, Thousand Oaks, CA 91320-1789. Principals only, please. EEO-Affirmative Action Employer M/F/D/V. We recognize that diverse perspectives are a key factor in the process of discovery.

AMGEN

Monsanto Company Postdoctoral Positions

The New Products and Produce Divisions of Monsanto Agricultural Group have several postdoctoral positions available for highly motivated individuals to conduct research in diverse areas of crop protection and improvement.

Study of genes involved in seed development and germination. This position requires experience in molecular biology with additional expertise in plant physiology and biochemistry (Job#NPD1).

Study of DNA recombinases for site-specific integration of DNA into plant chromosomes. This system will be used to study gene regulation in plants. This position requires experience in molecular biology (Job#NPD2).

Molecular biology of herbicide resistance. The successful candidate will investigate genes conferring resistance to Monsanto's Roundup® herbicide. Experience in molecular biology with knowledge of biochemistry is preferred (Job#NPD3).

Production of novel polymers of industrial importance in plants. This position requires experience in molecular biology with knowledge of biochemistry (Job#NPD4).

Improvement of vegetable and fruit crops through biotechnology. i. The successful candidate will study carbon metabolism in plants. Experience in plant physiology is required. ii. The successful candidate will investigate plant metabolism and gene expression. Experience in molecular biology with knowledge of biochemistry is preferred (Job#NPD5).

Disease resistance. i. The successful candidate will investigate expression of genes induced by fungal pathogens in crops. Experience in molecular biology and plant-pathogen interactions is required. ii. The successful candidate will work on a project to introduce resistance to viral pathogens in crops. Experience in molecular biology is required (Job#NPD6).

Insect control. The successful candidate will conduct mode of action studies and basic research to complement discovery work on insecticidal proteins. Experience in biochemistry or related discipline required. Experience in membrane biochemistry or protein toxins is desirable (Job#NPD7).

Nitrogen metabolism. The successful candidate will investigate enzymes involved in nitrogen metabolism in plants. Experience in biochemistry is required. Knowledge in plant physiology and/or molecular biology would be desirable (Job#NPD8).

Crop transformation. The successful candidates will have demonstrated expertise in plant regeneration and transformation (Job#NPD9).

Monsanto Agricultural Group is a world class organization with strong commitment to the improvement of crops through biotechnology. The qualified individuals will join scientists with expertise in plant biochemistry, molecular biology, tissue culture and transformation to develop products that provide value to agriculture worldwide.

Monsanto is an equal opportunity employer. We offer competitive salaries and a comprehensive benefits package.

Applicants should submit a letter indicating the position applying for along with curriculum vitae and three names of references to: Ms. Barbara Schiermeyer, New Products Division BB3B, The Agricultural Group, Monsanto Company, 700 Chesterfield Village Parkway, St. Louis, Missouri 63198.

SCIENCE: The Recruitment Advertising Leader.

With over 162,000 subscribers worldwide, SCIENCE reaches the largest number of qualified candidates with your recruitment message. To advertise, contact:

U.S.: Call Janis Crowley at
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(+44) 01223 302067, or fax to
(+44) 01223 302068.

Australia: Call Keith Sandell at
(+61) 02 922 2977,
or fax to (+61) 02 922 1100.

Japan: Call Mashy Yoshikawa at
(+81) 3 3235-5961,
or fax to (+81) 3 3235-5852.

SCIENCE

Science Advertising Calendar of Events

Mark Your Calendar for These Exciting Advertising Opportunities

10 February

Bonus Distribution to the AAAS Annual Meeting in Atlanta, Georgia, 17-20 February 1995. Over 3,500 scientists from around the globe will attend.

24 February

Special Advertising Section, *Euroscience at Work: Career Opportunities in European Biotechnology and Pharmaceuticals*.

SCIENCE explores the life sciences career market in Europe and tells readers where to find the best career opportunities.

3 March

Bonus Distribution to the Biotechnology/Pharmaceutical Job Fair, 10-11 March, New Jersey. Bonus Distribution to the American Physical Society meeting, 22-24 March, San Jose, California.

10 March

Editorial Focus, Molecular Biology: Cellular Regulation I. Bonus Distribution to attendees at the American Association for Cancer Research meeting, 19-21 March, Toronto, Canada. Bonus Distribution to USGEB, 30-31 March, Fribourg, Switzerland.

17 March

Special Advertising Section, *Careers in Biotechnology and Pharmaceuticals: Manufacturing & Regulatory Affairs*. Bonus Distribution to two Biotechnology/Pharmaceutical Job Fairs: 24-25 March, La Jolla, California and 28-29 April, Cambridge, Massachusetts.

24 March

Bonus Distribution to the American Chemical Society, 3-5 April, Anaheim, California.

31 March

Editorial Focus, Frontiers in Materials Science. Bonus Distribution to the Materials Research Society meeting, 18-20 April, San Francisco, California.

For Recruitment Advertising:

Call (202)326-6541, FAX (202)682-0816.

Recruitment Advertising Internet:

science_classifieds@aaas.org

For Product Advertising:

Call (202)326-6542,
FAX (202)682-0816.

SCIENCE



GRANTS FOR INTERNATIONAL JOINT RESEARCH IN THE AREAS OF MATERIALS, ENERGY AND GLOBAL ENVIRONMENT

The New Energy and Industrial Technology Development Organization (NEDO), a Japanese governmental implementing agency supervised by the Ministry of International Trade and Industry (MITI) of Japan, has been carrying out an International Joint Research Program since 1988. This program aims to contribute to the enhancement of the international level of industrial technology as well as to the advancement of international exchange by supporting international joint research teams which conduct superior research. In addition to supporting international joint research teams which conduct original and innovative basic research in the materials area, international joint research teams which conduct research in the energy area and the global environmental area will be provided with grants in FY 1995. The program in the global environment area will be conducted jointly with the Research Institute of Innovative Technology for the Earth (RITE).

Research grants will be provided to "International Joint Research Teams" which fulfill the following main requirements:

1. Each team, in principle, must be composed of four or more researchers;
2. Each team must consist of researchers of two or more different nationalities;
3. The research organizations where the team members' major activities take place must be located in two or more countries.
4. Each team must appoint a research coordinator and an accounting coordinator. The accounting coordinator must be responsible for accounting matters and function as the liaison between the team and NEDO. The accounting coordinator's organization and research site must be located in Japan, and he/she must be able to communicate with NEDO in Japanese about all accounting matters. The research coordinator can also hold the post of accounting coordinator.

FY 1995's program is shown below.

Research Area	Field of Research	Amount of Each Grant	Number of Themes to be Adopted	Recipients of Applications
Materials	1) Basic research concerning the investigation and elucidation of materials 2) Basic research concerning the practical use of materials	about 30,000,000 yen in FY 1995	5 themes	NEDO (Note a.)
Energy	Practical research on electric power generation technologies using oil-alternative energy, on load leveling technologies and on global environment conservation related to such technologies.	about 30,000,000 yen in FY 1995	4 themes	
Global Environment	(Basic research) on conservation and improvement of the global environment.	about 24,000,000 yen in FY 1995	2 themes	RITE (Note b.)
	(Practical research) concerning the production, generation and use of oil-alternative energy (excluding electric power generation technologies) which contributes to the conservation and improvement of the global environment.	about 30,000,000 yen in FY 1995	1 theme	

(Recipients of applications)

Note a. Materials and Energy area

International Joint Research Division,
Industrial Technology Department
New Energy and Industrial Technology Development Organization (NEDO)
Address : PO Box 1151, 29F, Sunshine 60 Bldg.
3-1-1 Higashi-Ikebukuro, Toshima-ku,
Tokyo, 170 Japan
Phone No. : 81-3-3987-9357
Telefax No.: 81-3-3981-1536

Note b. Global environment area

Research Proposals Reception Section,
Research Planning Department
Research Institute of Innovative Technology for the Earth (RITE)
Address : 9-2 Kizugawadai Kizu-cho Soraku-gun,
Kyoto, 619-02 Japan
Phone No. : 81-774-75-2302
Telefax No.: 81-774-75-2314

Please be informed that the amount of each grant and the number of themes to be adopted may be changed, and that this grant program is subject to government budget approval. A research team may submit an application a maximum of two times for a grant on the same subject.

The application period is from January 26, 1995 to April 26, 1995.

No applications will be accepted later than April 26th.

ATTENTION: If there are some discrepancies in a submitted application, for example, it does not follow the Application Guidebook or the research contents are different from the proposed research area, it will be considered invalid.



THE 1996 KING FAISAL INTERNATIONAL PRIZE FOR SCIENCE

(BIOLOGY)

INVITATION TO NOMINATE

The General Secretariat of the King Faisal International Prize is pleased to invite universities, scientific societies, research centres, and other learned circles throughout the world to nominate qualified candidates for the above Prize. Nominations will not be accepted from individuals or political parties.

Nominated work must:

- be published and original;
- represent a contribution of the highest distinction in the Prize category;
- benefit mankind and advance scientific knowledge;
- not have been awarded another international prize.

Nominations should include:

- an official letter of nomination detailing the scientific justification for the nomination;
- a typed CV detailing the nominee's academic background and experience, and listing all published works;
- six (6) copies of each nominated work (no nomination works will be returned);
- three (3) recent colour photos;
- full contact details.

The above information must be received by The King Faisal International Prize no later than 1 September 1995.

The decision of the Prize's Selection Committee is final.

Winners will be announced in February 1996 and will receive the Prize at an official ceremony later in the year.

Each winner receives:

- An abstract of his/her winning work, written in *Diwani* calligraphy and presented in a leather folder;
- A commemorative 22-carat, 200 gram gold medallion;
- SR350,000 (approximately US\$93,000). Joint winners in any category share the cash prize.

Nominations should be sent by registered airmail to:

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

**Telephone (966) (1) 465-2255
Fax (966) (1) 465-8685
Telex 404667 PRIZE SJ
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Founded 1905

Glaxo

CENTRE FOR NATURAL PRODUCT RESEARCH INSTITUTE OF MOLECULAR AND CELL BIOLOGY

The Centre for Natural Product Research, located within the Institute of Molecular and Cell Biology of the National University of Singapore, represents a major new initiative in drug discovery. Jointly funded by Glaxo, the Singapore Economic Development Board and the IMCB, the Centre operates and develops high throughput screens in the search for lead compounds from biological sources. To strengthen our team, we wish to recruit motivated individuals with a proven track record of scientific achievement, good communication skills and ability to function in a multi-disciplinary setting.

MYCOLOGIST

We are looking for a candidate with experience in fungal physiology and taxonomy to provide directions for the microbial group in isolation and cultivation of fungi for screening. The nature of the work requires a broad-based working knowledge of preferably tropical fungi and technical expertise in media design and fermentation optimisation.

BIOCHEMIST AND MOLECULAR/CELL BIOLOGIST

We need scientists trained in biochemistry, molecular or cell biology to collaborate with researchers in specific disease areas to identify targets and to develop high-throughput biological screens. Relevant working experience in drug discovery programmes is essential for these positions.

NATURAL PRODUCTS CHEMIST

We want to recruit a chemist who will be responsible for the isolation and characterisation of biologically active compounds from plant and microbial sources. The work involves interacting closely with the sample supply and screening groups to ensure the successful progression of bioactive leads. Familiarity with high-throughput screening would be advantageous.

All these positions require a PhD degree and offer excellent opportunities for career and personal development. We offer competitive terms of employment. For consideration, please send your curriculum vitae to:

**Head
Centre for Natural Product Research,
Institute of Molecular and Cell Biology
National University of Singapore
10 Kent Ridge Crescent
Singapore 0511
Tel: 65-7726824 Fax: 65-7791117**

SCIENCE Advertising Supplement

Euroscience at Work: Career Opportunities in European Biotechnology and Pharmaceuticals

24 February 1995

Euroscience at Work examines the European life science job market. A practical career planning section for life scientists, *Euroscience at Work* looks at how pharmaceutical companies are adapting to the changing European market and gives an overview of the expanding European biotechnology industry.

Full page recruitment advertisements receive placement throughout this special advertising section. Fractional ads will be highlighted by a new Global Career Opportunities banner in the regular recruitment section of the issue.

**Recruitment Advertising Space Reservation Deadline:
7 February 1995**

To advertise, call:
In Europe, Gordon Clark
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In the U.S., Janis Crowley
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fax (202) 682-0816.

SCIENCE



GLOBAL CAREER OPPORTUNITIES



NATIONAL UNIVERSITY OF SINGAPORE INSTITUTE FOR MOLECULAR AGROBIOLOGY RESEARCH APPOINTMENTS



Applications are invited for appointments as **Junior Research Fellows, Research Fellows and Principal Investigators.**

The Institute for Molecular Agrobiology (IMA) was recently established by the National Science and Technology Board under the parentage of the National University of Singapore. Its mission is:

To spearhead agricultural research at the genetic and molecular levels to establish Singapore as a world-class centre for agrotechnology industries.

The Institute wishes to set up about 20 independent laboratories focusing on, but not limited to, the following research areas:

**Plant Cell Biology
Plant Developmental Biology
Viral, Bacterial and Fungal Pathogens of Plants
Defense Mechanisms of Plants
Yeast Molecular Genetics
Fish Developmental Biology**

**Fish Immunology
Mechanisms of Pathogenesis in Fish
Animal Cytokines
Poxviruses and Insect Viruses
Genome Analysis
Mechanism of Pathogenesis in Animals**

Gross annual emoluments range as follows:

Junior Research Fellow (Doctoral Student) S\$ 18,570 - 35,970
Research Fellow (Postdoctoral Fellow) S\$ 55,910 - 71,400

Principal Investigator
Senior Scientist S\$ 65,200 - 122,820
Associate Professor S\$ 108,820 - 151,480
(US\$1.00 = S\$1.46 approximately)

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered. In addition, a 13th month Annual Allowance (of one month's salary) and an Annual Variable Component (of normally 2 months' salary) are payable at year end, under the flexible wage system, to staff on normal contracts. Leave, medical and other benefits will be provided.

Principal Investigators who will be heads of independent laboratories will be appointed at the rank of Associate Professor or Senior Scientist (equivalent to Assistant Professor), depending on experience. Teaching responsibilities are modest and limited to graduate level. Investigators using innovative approaches to explore the mechanisms of basic biological processes in model organisms (e.g. Arabidopsis and zebrafish) are encouraged to apply.

Depending on qualification and seniority, Principal Investigators may be provided with up to 5 fully funded postdoctoral positions.

Applications for positions of **Principal Investigators** should include a copy of the curriculum vitae, a brief description of past research experience and accomplishments, the proposed research programme at IMA and names of three to five referees and those for positions of **Research Fellows and Junior Research Fellows** should include a copy of the curriculum vitae along with the names of three referees. **Junior Research Fellows** are expected to enroll in the University's PhD programme.

Applications should be sent to the following address: **The Acting Director, The Institute for Molecular Agrobiology, c/o Dean's Office, Faculty of Science, National University of Singapore, Lower Kent Ridge Road, Singapore 0511**

Enquiries may also be sent through INTERNET to: zookhw@nus.sg, or through Telefax: (65) 7774279

バイエル薬品(株) 中央研究所

管理職候補募集 ＜自己免疫疾患分野＞

ドイツ・バイエル社は海外の研究拠点として、アメリカに次いで日本に中央研究所を設立します。日本は、アレルギー及び免疫分野を担当しますが、ドイツ・アメリカ等との学術交流が頻繁なため国際感覚豊かなリーダーシップのとれる優秀な研究者を募集します。

職務内容: 自己免疫疾患領域における医薬品探索のための分子生物学的研究

※当職位には将来の管理職として、研究方針の策定及びプロジェクトの指揮等のマネジメントの職務が追加される予定です。

応募資格: 上記関連分野の研究者。博士及び企業研究所・海外生活・部下指揮の各経験者歓迎。日本語・英語必須。

勤務地: 中央研究所（'95年2月開設）京都府相楽郡木津町・関西文化学術研究都市木津南地区

待遇: 弊社規定により優遇、借上社宅制度有、入社・面談日応談。

応募書類: 履歴書（日・英）、研究概要（日・英各 A4 1枚程度）及び主要論文のコピーを下記宛お送りください。

選考: 1次/書類審査 2次/面接他

〒532 大阪市淀川区宮原3-5-36新大阪第2森ビル
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TEL.06-398-1145 担当 野本・藤本

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UNSW

THE UNIVERSITY OF NEW SOUTH WALES AUSTRALIA

DEAN, FACULTY OF SCIENCE

Applications are invited for the position of Dean, Faculty of Science which will become vacant in March 1995 with the resignation of Professor A R Hyland who is to take up the position of Deputy Vice-Chancellor at Southern Cross University.

The Dean is responsible to the Vice-Chancellor for the management of the academic, financial and personnel activities of the Faculty and of the physical resources allocated to it. With the advice of the Dean's Advisory Committee and the endorsement of Faculty, the incumbent will be expected to ensure that Faculty achieves its academic aims and objectives and, as a member of the Vice-Chancellor's Advisory Committee, will contribute to the general management and development of the University. The Dean is encouraged to maintain active teaching, research and research supervision and to exercise academic and/or professional leadership in the Faculty.

Applicants should possess high scholarly status in any of the disciplines represented in the Faculty, a demonstrated capacity for leadership, proven administrative ability at senior level, an interest in, and capacity for, creative thinking about academic development in fields appropriate to the Faculty and a commitment to further develop and implement EEO/AA policies and principles.

The successful applicant will be offered an appointment as Dean for three years, renewable for a further three-year period, together with a substantive tenured academic appointment (Associate Professor or Professor) in one of the Schools of the Faculty which cover the disciplines of Mathematics, Physics, Chemistry and Optometry.

An attractive remuneration will be negotiated including a fully maintained motor vehicle.

Subject to consent of the University, senior academic staff may undertake a limited amount of higher consultative work. The University reserves the right to fill this position by invitation. Membership of an approved University superannuation scheme is a condition of employment for this position.

Details of the position together with conditions of appointment and application procedures, are available from Ms Elizabeth Limbrick, Senior Appointments, Human Resources Department, University of New South Wales, Sydney, NSW 2052 Australia. Telephone (61 2) 385 2716, facsimile (61 2) 313 6561.

Enquiries regarding the position may be made to Professor A J Wicken, Deputy Vice Chancellor (Academic Affairs) (61 2) 385 3015.

Applications should reach Senior Appointments by 24 February 1995. PLEASE QUOTE Ref 95/1505SCI

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Senior Lectureship/ Lectureship in Oral Biology

Applications are invited for a newly created Senior Lectureship (Non-Clinical)/Lectureship (Clinical/Non-Clinical) (RF 94/95-37) in the Oral Biology Unit of the Faculty of Dentistry. The appointment will be tenable from as soon as possible and will be made on a fixed-term basis for a period of two to three years, with a possibility of renewal.

Applicants, who may or may not be clinically qualified, should have a suitable postgraduate qualification and experience in molecular biological techniques related to oral biology. The appointee will be expected to liaise strongly with the clinical departments of the Faculty of Dentistry and the University's Institute of Molecular Biology to extend a multi-disciplinary research programme currently in place, and contribute to both undergraduate and postgraduate teaching; and should have experience in collaborative research and a strong research interest and background in oral biology.

Annual salaries [non-superannuable but attracting 15% (taxable) terminal gratuity] are on the following scales, with starting salary depending on qualifications and experience: Senior Lecturer (Non-Clinical) HK\$641,580 - HK\$861,900 (9 points: approx. US\$83,322 - US\$111,935; Lecturer (Clinical) HK\$397,560 - HK\$787,740 (11 points: approx. US\$51,631 - US\$102,304); Lecturer (Non-Clinical) HK\$412,980 - HK\$689,880 (11 points: approx. US\$53,634 - US\$89,595; US Dollar equivalents as at 23.12.94). At current rates salaries tax will not exceed 15% of gross income. Children's education allowances, leave and medical benefits are provided; housing or tenancy allowances are also provided in most cases at a charge of 7½% of salary.

Further particulars and application forms may be obtained from the Appointments Unit, Registry, The University of Hong Kong, Hong Kong (fax: (852) 559 2058; E-mail: APPTUNIT@HKUVM1.HKU.HK). Particulars are also available on the University's listserv accessed by E-mail as "listserv@hkuvml.hku.hk" (specify "get apptment filelist" for list of vacant posts).

Closes **12 April 1995**.

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Applicants contact the Director, Dr. Y H Tan, Fax No. (65) 7770402.

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The Section of Pulmonary and Critical Care Medicine of the Department of Internal Medicine of Yale University School of Medicine invites applications for a research faculty position at the **ASSOCIATE RESEARCH SCIENTIST** level. Outstanding candidates with a Ph.D. or M.D. degree will be considered. Experience in molecular and cell biology is essential. Interest in inflammation, cytokine biology and virology is highly desirable. The chosen candidate will work closely with scientists in the Pulmonary Immunobiology Laboratory on research projects focusing on cytokines, viruses and asthma. Please respond with curriculum vitae and three letters of recommendation to: **Jack A. Elias, M.D., Professor of Medicine, Chief of Pulmonary and Critical Care Medicine, Yale University School of Medicine, Section of Pulmonary and Critical Care Medicine, Department of Internal Medicine, 333 Cedar Street, 105 LCI, New Haven, CT 06520-8057.** Telephone: 203-785-4163; FAX: 203-785-3826. *Yale University School of Medicine is an Equal Opportunity/Affirmative Action Employer.*

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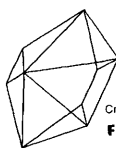
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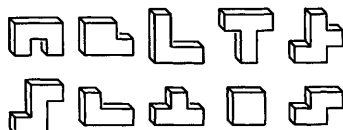
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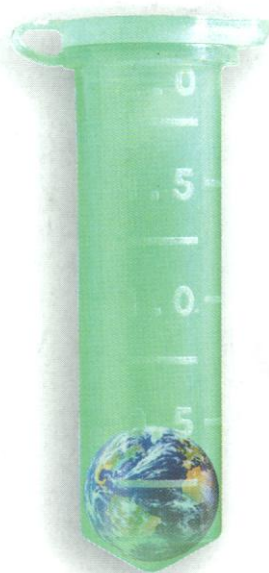
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