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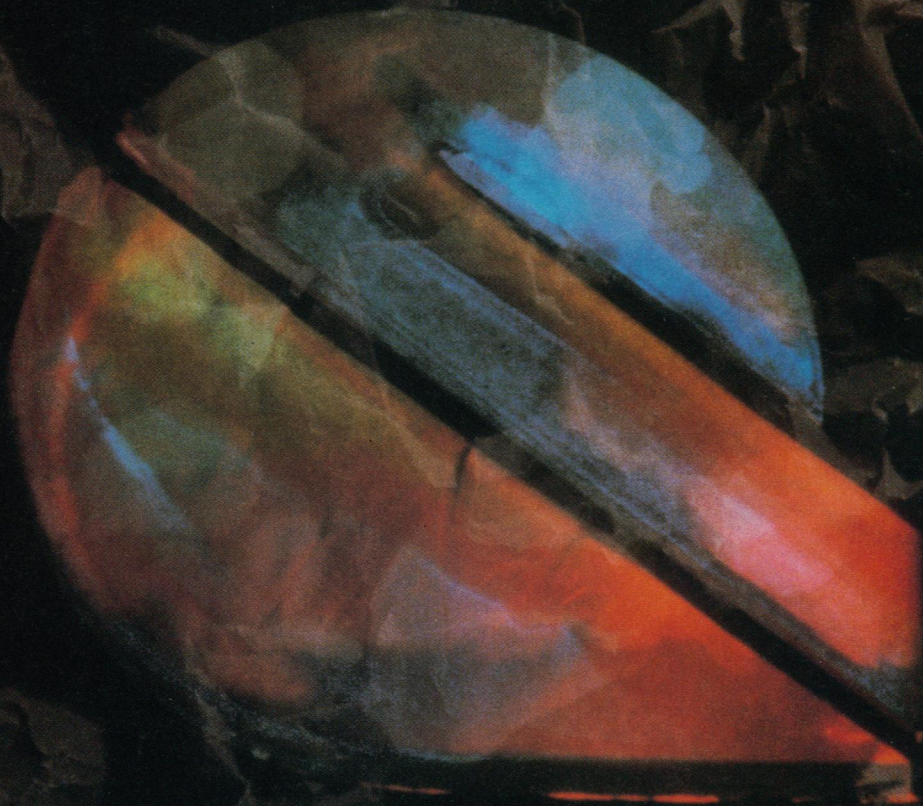


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Some of the international meetings scheduled for 1991 are:

**Progress and Perspectives in
Chemoprevention of Cancer**
March 14-15 / Milan (I)
Scientific Organization:
U. Veronesi (I)

Hereditary Tumors
April 22-24 / Florence (I)
Scientific Organization:
G.D. Aurbach (USA) and U. Veronesi (I)

**2nd Int. Conference on Research Policies
and Quality Assurance**
May 6-7 / Rome (I)
Scientific Organization:
A.E. Shamoo (USA)

Nutritional Aspects of Osteoporosis
May 16-18 / Lausanne (CH)
Scientific Organization:
P. Burckhardt (CH) and R.P. Heaney (USA)

Biotechnology of Cell Regulation
June 20-22 / Siena (I)
Scientific Organization:
Y. Nishizuka (J) and I. Pastan (USA)

Stress and Reproduction
July 25-27 / Port Douglas (AUS)
Scientific Organization:
J. Funder (AUS)

**Molecular and Cellular Biology of
Reproduction**
September 9-10 / Capri (I)
Scientific Organization:
W. Bardin (USA) and K.J. Catt (USA)

**A Molecular View of Steroid Biosynthesis
and Metabolism**
October 14-16 / Jerusalem (IL)
Scientific Organization:
I. Hanukoglu (IL)

**IL-6: Physiopathology and Clinical
Potentials**
October 21-22 / Montreux (CH)
Scientific Organization:
M. Revel (IL)



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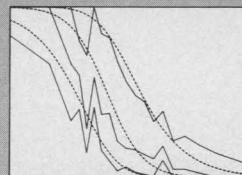
Assessing Higher Order Thinking in Mathematics

Edited by Gerald Kulm

Teaching higher order thinking is essential in today's world. And what is taught must be tested. Unfortunately, most mathematics tests focus primarily on rote computational skills and memorized facts rather than on higher order thinking. This book addresses such concerns. The authors explore new approaches to mathematics assessment, provide directions for reforming mathematics testing, and give examples of innovative test items. It is especially valuable for teachers, test publishers, researchers, and federal and state educational policy makers.

Topics include: A new world view of assessment in mathematics; power items and the alignment of curriculum and assessment; assessing student growth in mathematical problem-solving; computer-based mathematics assessment; calculators and mathematics assessment; students' theories about mathematics and their mathematical knowledge; assessing schema knowledge for arithmetic story problems; critical evaluation of quantitative arguments; investigation of structured problem-solving items; and new directions for mathematics assessment.

Assessing Higher Order Thinking in Mathematics



Edited by Gerald Kulm

1990; 216 pp.; indexed
#89-27S - softcover; \$24.95
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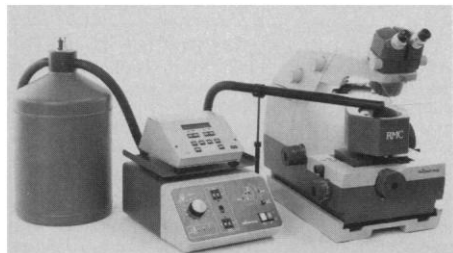
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Products & Materials

Cryosectioning for Electron and Optical Microscopy

The CR-21 Universal Cryosectioning Attachment fits any modern ultramicrotome. Featuring a compact, lightweight, microprocessor controller and a noncontact, nonpressurized liquid nitrogen system, the



CR-21 offers economic operation over the range of +55° to -170°C. The instrument is suited for ultrathin cryosectioning for electron microscopy and cryostat sectioning at -20° to -40°C. Research and Manufacturing Co. Circle 561.

Plankton Chambers and Cylinders

A complete line of Hydro-Bios microscopy accessories for plankton investigation and counting includes both tubular plankton chambers and combined plate chambers in several sizes. The accessories are designed for use with inverted microscopes in plankton settling techniques. The tubular plankton chambers are made from plexiglass with brass bases and come complete with cover and base plates. Schluter Instruments Corp. Circle 524.

RNA PCR Kit

The GeneAmp RNA PCR Kit contains all the components necessary for transcription of RNA to cDNA and amplification of cDNA using the GeneAmp polymerase chain reaction process. Researchers can use

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

the kit to generate a cDNA product in excess of 2 kilobases from all types of RNA. The reverse transcription and amplification reactions are both performed in a single tube with the same buffer. Designed for research use only, the kit is applicable to a wide range of studies, including amplification of cDNA derived from all different types of RNA and detection of specific RNA species present at low copy number. Perkin-Elmer Cetus. Circle 559.

Computerized Living Environment for Rodents

The Rat-LAN System is expandable from 12 to 192 fully instrumented rodent cage modules, with 24-hour computer monitoring of conditions. Cages include clip-on feeder trays and standard water feeders connected by a manifold to a common piping system. Optional features include activity wheels, operant chambers, and drinking measurement. Data are collected from individual module microprocessors through a local area network to an IBM-compatible computer. Cerex Corp. Circle 526.

Combination Cross-Linker and Viewer

The Model EI-5002 View-Linker is a combined microprocessor-controlled ultraviolet (UV) cross-linker and a UV viewing table. The UV energy can be programmed to optimize cross-linking of DNA and RNA to membranes. A built-in sensor monitors the energy applied to the membrane for reproducible results. Membranes up to 22 cm² can be processed in less than 2 min. The device also has a 20 by 20 cm UV filter for gel viewing or photography. Novex. Circle 568.

Software to Analyze Dynamic Systems

TraX is the first software package developed at the Soviet Academy of Sciences to become available in the United States. TraX is designed for the analysis of dynamic systems on microcomputers. It has been used to investigate models of predator-prey dynamics, neuron physiology, enzyme kinetics, problems in physics such as turbulence, and purely mathematical problems. TraX allows users to explore the behavior of continuous or discrete, deterministic or stochastic mathematical models to discover graphically the location of equilibria and whether there are cycles, unstable points, or chaos.

TraX handles up to ten simultaneous equations with ten parameters or functions. It requires an IBM PC, XT, AT, or compatible; DOS 2+; 512K random access memory; and CGA, EGA, VGA, or Hercules monographics. Applied Biomathematics. Circle 560.

Monoclonal Antibodies

Six new monoclonal antibodies to mouse antigens are available for research: Thy-1.2 (Pan T), Ly-2 (CD8a), L3/L4 (CD4), Ly-1.2 (T cells), Macroph (macrophages), and Ly-5 (B220) (B cells). Coulter. Circle 562.

QB END/10 is a monoclonal antibody to human endothelial cell membranes. Serotec. Circle 563.

Monoclonal antibody AE8 recognizes cytokeratin 13 in routinely processed, paraffin-embedded tissue. Cytokeratin 13 is an acidic 54-kD protein found in esophageal, ventral tongue, exocervical, and many other internal, stratified squamous epithelia. BioGenex Laboratories. Circle 564.

Literature

Amino System 1 is a six-page brochure describing a new system for automated quantitative analysis of amino acids. Gilson Medical Electronics. Circle 469.

The Catalog of Personal Computing Tools for Scientists and Engineers presents more than 300 hard-to-find IBM-PC compatible products. Personal Computing Tools. Circle 460.

General Catalog illustrates an expanded line of ultra-low temperature freezers, cryogenic storage freezers, laboratory refrigerators, environmental chambers, and related accessories. Revco Scientific. Circle 461.

The *Genetic Technology Grade Agarose* brochure describes a line of agarose gels and their molecular biology applications. FMC BioProducts. Circle 448.

The *Sigma Molecular Biology 1990 Catalog* offers nucleic acid-modifying enzymes, nucleic acids, reagents, equipment, and books. New products include pYAC vectors, a DNase- and RNase-free alkaline phosphatase preparation, deoxy- and dideoxynucleoside triphosphates for sequencing, microbiological media, and antibiotics. Sigma Molecular Biology. Circle 449.

Model F-3010 Fluorescence Spectrophotometer is a four-page brochure describing this new instrument. Hitachi Instruments. Circle 551.

HPLC Columns, Packings, & Accessories is a catalog presenting a full line of high-performance liquid chromatography accessories. ES Industries. Circle 556.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year, and is mailed on issue date. Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. **SCIENCE** reserves the right, in its discretion, to decline to publish advertisements submitted to it.

LINE CLASSIFIED ADVERTISEMENTS

DEADLINE: Thursday, 10 a.m., 2 weeks prior to issue date. Advertising is accepted only in writing.

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RATE: \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. To **ESTIMATE** ad cost, structure ad copy on a 52-character line; include any desired heading on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines x \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. **SCIENCE** cannot provide proofs of typeset ads.)

CREDIT CARDS: **SCIENCE** accepts MasterCard and VISA.

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

BOXES AND LOGOS: Any 1-column line classified ad can be boxed and/or published with logo. No extra production charge for use of box or logo. For boxed ads, one line equals 48 characters and spaces; two additional lines will be added to cost of ad to allow for top and bottom rules. Logos are billed according to number of lines needed to accommodate logo.

SITUATIONS WANTED ADS: As a service to AAAS members in good standing, **SCIENCE** offers free placement of Situations Wanted ads for individuals seeking full-time or part-time employment. A blind box may be used. Ads must be submitted in writing with text of 20 words or less, not including address or box number, and are limited to two insertions per member in each calendar year. Please enclose **SCIENCE** mailing label including AAAS membership number when submitting ad.

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

Address ad copy or requests for information to:

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

DISPLAY PERSONNEL ADVERTISEMENTS

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

Scherago Associates, Inc.
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050
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RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications. **SCIENCE** encourages applicants for positions to investigate employment laws, non-discrimination policies, visa requirements, and cultural differences in the country advertising for employees.

To reply to a blind box ad, address correspondence to:

Box (give number)
SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY. Tenure track, Ph.D. Expertise or experience in teaching biochemistry and one or more of the following: microbiology, immunology, molecular biology, and general biology. Previous teaching experience preferred. Responsibilities include research involving undergraduates. The department is composed of seven members and occupies new facilities. Send curriculum vitae including reference list to: **Dr. Clare Korte, Department of Biology, Box 10, Winona, MN 55987** by 6 January 1991. *Saint Mary's College is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR WILDLIFE ECOLOGY

The Department of Wildlife Ecology at the University of Wisconsin-Madison seeks applicants for a 12-month, tenure-track position as assistant professor. An earned Ph.D. in wildlife ecology/management/biology is required and postdoctoral research and teaching experience are desirable. The successful applicant is expected to conduct research with large ungulates and carnivores, and to teach two courses each year. Send curriculum vitae, college transcripts, three to five letters of reference, and statement of research interests by 1 February 1991 to: **Dr. Robert L. Ruff, Chair, Department of Wildlife Ecology, 226 Russell Labs, University of Wisconsin, Madison, WI 53706. Telephone: 608-262-2671.** *The University of Wisconsin is an Equal Opportunity Employer.*

DEVELOPMENTAL BIOLOGIST. Tenure-track **ASSISTANT PROFESSORSHIP.** Must have Ph.D., take part in graduate program, establish courses in discipline, teach anatomy and physiology, and establish research program. Closing date 1 December 1990. Send curriculum vitae, names and addresses of three references, and description of teaching and research interests to: **Biology Search Committee, P.O. Box 10037, Lamar University, Beaumont, TX 77710.** *An Equal Opportunity/Affirmative Action Employer.*

Princeton University. Psychology department. An appointment is anticipated at the **ASSISTANT PROFESSOR** level, or possibly at a higher level, in the field of cognitive psychology, including perception, memory, and problem solving. Candidates who combine their work in this field with an interest in establishing links with social psychology or neuroscience are especially encouraged to apply. Candidates should have a Ph.D. and a commitment to teaching at both the graduate and undergraduate levels, and are expected to be committed to an active research program. Applicants should submit curriculum vitae and three letters of reference to: **Search Committee P/JL, Department of Psychology, Princeton University, Green Hall, Princeton, NJ 08544-1010**, by 15 January 1991. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

VETERINARY ANATOMIST

The Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, College of Veterinary Medicine, Washington State University, invites applications or nominations for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. The candidate will be expected to participate in teaching veterinary gross anatomy and/or microscopic anatomy to D.V.M. and undergraduate students and to develop research and graduate programs in the area of his/her expertise. Areas of research in the department include endocrinology, locomotion, neurobiology, teratology, toxicology, and cellular, cardiovascular, and exercise physiology. Qualifications: D.V.M./Ph.D. or Ph.D.; experience in teaching veterinary gross anatomy and/or microscopic anatomy is highly desirable; ability to conduct independent research is required. Rank and salary will be commensurate with qualifications. Starting date is 1 July 1991 or earlier.

Written applications must include curriculum vitae and the names, addresses, and telephone numbers of three references. Applications, nominations, or inquiries should be sent to: **Dr. C. S. Zamora, Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, College of Veterinary Medicine, Washington State University, Pullman, WA 99164-6520.** Review of applications will begin 2 January 1991 and will continue until the position is filled.

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

POSITIONS OPEN

ASSISTANT PROFESSOR, DEPARTMENT OF PHYSIOLOGY. Cellular and molecular physiology. The Department of Physiology seeks to fill a tenure-track faculty position with emphasis on cardiovascular physiology. We encourage applications from individuals with research interests in ion movements across membranes but will consider outstanding applicants in other areas. The search favors individuals whose research involves biochemical, biophysical, or molecular biological probes of physiological processes. *Women and minorities are encouraged to apply.* Applicants should send curriculum vitae, a summary of research interests and plans, and three letters of reference to: **Dr. Richard L. Moss, Chair, Department of Physiology, University of Wisconsin, 1300 University Avenue, Madison, WI 53706.** Deadline is 15 December 1990. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

DEVELOPMENTAL GENETICIST. The Department of Biology, University of North Carolina at Chapel Hill, seeks an outstanding scientist using molecular or cellular approaches in a model eukaryotic organism to investigate problems in developmental biology. The tenure-track appointment at the rank of **ASSISTANT PROFESSOR** will be effective 1 July 1991 or later. An appointment at a higher rank may be possible in exceptional cases. Applicants should send curriculum vitae, a one-page statement of research interests, selected publications, and four letters of recommendation by 7 January 1991 to: **Chairman, Developmental Biology Search, Department of Biology, University of North Carolina, Chapel Hill, NC 27599-3280.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

UNIVERSITY OF WISCONSIN-MADISON

The Department of Psychology anticipates making an appointment at the **ASSISTANT PROFESSOR** level in the area of **COGNITIVE NEUROSCIENCE** beginning August 1991. Candidates who are working in any of the various areas within this field will be considered, including neurophysiological studies of behaving primates, neuropsychological investigations of cognitive function in humans, and computational modeling of neural function. Scientists whose research includes more than one of these areas will be favored. Curriculum vitae plus three letters of evaluation and selected reprints should be sent to: **Chair, Cognitive Neuroscience Search Committee, Department of Psychology, University of Wisconsin-Madison, 1202 West Johnson Street, Madison, WI 53706.** *The University of Wisconsin-Madison is an Equal Opportunity/Affirmative Action Employer and especially encourages women and minorities to apply.* To ensure consideration, applications should be received by 1 January 1991.

GENETICIST/CELL BIOLOGIST

Geneticist/cell biologist studying cellular or developmental phenomena in a eukaryotic system. The Biology Department of Boston College has a full-time, tenure-track position available at the **ASSISTANT PROFESSOR** level beginning in September 1991 for an individual with a Ph.D. and at least 2 years of postdoctoral experience to establish a vigorous, externally funded research program. In addition to teaching in his/her area of expertise, the candidate will be expected to contribute to departmental teaching needs in one of a number of other areas such as: human genetics, introductory biology, immunology, virology, or developmental biology.

Boston College, a university of 14,500 students, has a growing biology department with 20 faculty members and 45 graduate students in the M.S. and Ph.D. programs. The university has a strong commitment to research and offers competitive salaries, excellent start-up funds, and well-equipped facilities. Applications should include curriculum vitae, a list of publications, and a summary of current and future research plans. Applicants should also arrange for three letters of reference to be sent. All materials should be received by 15 January 1991.

**Search Committee
Biology Department
Higgins Hall
Boston College
Chestnut Hill, MA 02167**

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR CARDIOVASCULAR/BIOCHEMICAL PHARMACOLOGY

Applications are invited for a tenure-track assistant professor position in the Department of Pharmacology at the University of Alabama at Birmingham (UAB). Applicants should have a Ph.D. in relevant area with two or more years of postdoctoral training. Interest and expertise in endothelial cell biology and functions in vivo and in vitro is desired. The successful candidate will be expected to develop an independent research program with outside funding. Send curriculum vitae and three letters of reference to: **Dr. Robert B. Diasio, Professor and Chairman, Department of Pharmacology, UAB Station, Box 402, Birmingham, AL 35294.**

UAB is an Equal Opportunity/Affirmative Action Employer.

PLANT BIOCHEMIST. Tenure-track ASSISTANT PROFESSOR, fall of 1991. Ph.D. required. Duties include participation in general biology, biochemistry, and plant sciences programs, and supervision of master's candidates. Research in plant biochemistry is expected. Application including curriculum vitae, a brief statement of teaching and research goals, graduate transcripts, and names, addresses, and telephone numbers of three references should be sent by 15 January 1991 to: **Dr. Foster Levy, Chair of Search Committee, Department of Biological Sciences, East Tennessee State University, P.O. Box 23,590A, Johnson City, TN 37614.**

East Tennessee State University is an Affirmative Action/Equal Opportunity Employer. Applicants should be U.S. citizens or permanent residents.

PLANT PHYSIOLOGIST

The Botany Department at the University of Rhode Island seeks a plant physiologist broadly educated in the botanical sciences to fill a tenure-track position at the ASSISTANT PROFESSOR level beginning 1 September 1991. The successful candidate will be expected to establish a vigorous research program centered around the physiology of vascular plants that will attract external funding. Teaching responsibilities include courses in introductory plant biology and plant physiology, and an advanced course in the candidate's area of expertise. Candidates must have a Ph.D. in the biological sciences, skills necessary for effective teaching, and an established record of quality research and publication. Postdoctoral experience is preferred. Applicants should submit a statement of research interests, curriculum vitae, official undergraduate and graduate transcripts, and the names, addresses, and telephone numbers of four persons who may be contacted as references to: **Search Committee Chair, Botany Department, The University of Rhode Island, P.O. Box G, Kingston, RI 02881.** Review of applications will begin 17 December 1990 and continue until the position is filled. *The University of Rhode Island encourages applications from women and minorities and is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF NEW ENGLAND ASSISTANT PROFESSOR PHYSIOLOGY

Applications are invited for two tenure-track positions in the Department of Physiology at the University of New England College of Osteopathic Medicine. Prerequisites include a doctoral degree, at least 2 years of postdoctoral training (preferably in the areas of reproductive, endocrine, or gastrointestinal physiology), and documented evidence of excellence in teaching at the graduate and/or medical school level. The successful applicant will be responsible for instruction in the medical and M.S. nurse anesthesia programs and will be expected to pursue an active research program supported by extramural funding. Please submit, by 30 November 1990, curriculum vitae, a detailed statement of teaching interests and experience, and the names of three references to:

James M. Norton, Ph.D.
Chairperson, Department of Physiology
University of New England
College of Osteopathic Medicine
11 Hills Beach Road
Biddeford, ME 04005

The University of New England is an Affirmative Action/Equal Opportunity Employer and encourages female and minority candidacies.



DEAN COLLEGE OF ARTS AND SCIENCES

The University of Miami invites nominations and applications for the position of Dean of the College of Arts and Sciences. The Dean is the chief academic officer of the College and reports to the Executive Vice President and Provost.

THE UNIVERSITY. The University of Miami, located in Coral Gables, Florida, is a privately supported, non-sectarian institution which currently enrolls approximately 9,000 undergraduate and 5,000 graduate students. The University is comprised of eleven degree granting schools and colleges, including Architecture, Arts and Sciences, Business Administration, Communication, Education, Engineering, Law, Medicine, Music, Nursing and Marine and Atmospheric Sciences. The core of the University is its 1,706 full-time faculty housed in three academic campuses within the greater Miami area. The University is currently ranked fortieth in the nation in terms of external research funding.

THE COLLEGE. The College, located on the University's 260-acre Coral Gables campus, has an enrollment of 3,400 undergraduate and 380 graduate students seeking majors in departments of Anthropology, Art and Art History, Biology, Chemistry, English, Foreign Languages, Geography, Geology, History, Mathematics and Computer Sciences, Philosophy, Physics, Psychology, Religion, Sociology, and Theatre Arts. The College has 295 full-time and 91 part-time faculty.

THE POSITION. The Dean provides leadership and support for the faculty; focuses the intellectual directions of the College; provides the appropriate environment for teaching, research and service; represents the interests of the College both internally and externally; provides leadership in monitoring, planning and implementing academic programs; and administers the budget of the College.

QUALIFICATIONS. Candidates should have an earned doctorate in a discipline associated with the College; a record of teaching and scholarship commensurate with the appointment as a tenured professor in a department of the College; academic administrative experience; a commitment to liberal education and to the importance of excellence in teaching; the ability to work with the faculty and the University Administration in a humane and intelligent manner; and represent the interests of the College in the community.

COMPENSATION. Salary compensation will be commensurate with the experience and qualifications of the person selected.

APPLICATIONS AND NOMINATIONS. Formal review of candidates will begin on November 1, 1990. Applications and nominations will be accepted until a suitable candidate is selected. Applications must include a letter of interest, a curriculum vitae and the names of three references. The references will not be contacted before the appropriate time. Send nominations and applications to:

Mary Doyle, Dean
Chair, Arts & Sciences Dean Search
Office of Dean, School of Law
P.O. Box 248087
Coral Gables, Florida 33124-8087

The University of Miami is an Equal Opportunity Affirmative Action Employer.

The Wellcome Trust

Director

Applications are invited for the position of The Director of The Wellcome Trust to succeed Dr P O Williams, FRCP, who retires on 31st December 1991. It is hoped that the individual appointed would join the Trust in the autumn of 1991 to allow a period of familiarisation.

The post is a demanding one, particularly as the Trust's support of biomedical research is growing rapidly. The opportunity to play a creative role in the future of biomedical science has never been greater and the ability to interact with the scientific community at all levels is of vital importance.

The Wellcome Trust is the largest grant-giving charity in the field of Medical Research in the United Kingdom. It has 140 employees and an annual expenditure in excess of £75 million.

The successful applicant must have a strong base in biomedical research and, preferably, but not essentially, be medically qualified. The large and increasing financial resources of the Trust mean that experience and confidence in administering such funds, and leading highly trained scientific and professionally qualified administrative staff, would be a distinct advantage. The Trustees are looking for proven ability and leadership and the salary will be commensurate with these aims.

Written applications, or written requests for further information, should be addressed to The Chairman, Post DT, The Wellcome Trust, 1 Park Square West, London NW1 4LJ.

Closing date 30th November 1990.

POSITIONS OPEN

The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR** (tenure track). Special preference will be given to those expert in x-ray crystallographic analysis of biological macromolecules. The person selected is expected to establish a strong independent research program, advise Ph.D. students in thesis research, and teach both medical and graduate students. Send résumé, summary of research interest, and three letters of reference to: **Dr. Robert L. Hill, Duke University Medical Center, Durham, NC 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.** The closing date for receipt of applications is 15 January 1991.

ASSISTANT PROFESSOR PHARMACOLOGY/TOXICOLOGY

Applications are invited for a tenure-track position at the assistant professor level. *Must be a U.S. citizen or have the legal right to work in the United States.* Minimum qualifications include: a Ph.D. and 2 to 3 years of postdoctoral training in biochemical/molecular pharmacology/toxicology. Responsibilities include graduate and undergraduate pharmacology/toxicology instruction and maintenance of an independent, externally funded research program. Send curriculum vitae, statement of research interests, recent publications, and the names of three references by 15 February 1990 to: **Mostafa Z. Badr, Ph.D., Chairman, Search Committee, Division of Pharmacology, University of Missouri-Kansas City, 2411 Holmes Street, M3-115, Kansas City, MO 64108.**

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

ECOLOGIST: MICROBIAL, BIOREMEDIATION, OR RESTORATION

The Department of Biological Sciences at Idaho State University invites ecologists with interests in hazardous waste management to apply for a tenure-track **ASSISTANT PROFESSORSHIP**. A Ph.D. in ecology or a closely related field is required and postdoctoral experience is preferred. Individuals with research expertise in microbial ecology or environmental toxicology are encouraged to apply. Primary teaching responsibilities include courses which are part of a graduate program in hazardous waste management offered in cooperation with the Idaho National Engineering Laboratory: ecological concepts, environmental science, and pollutants. The successful candidate will develop an active research program, supervise graduate students, and offer upper division/graduate course(s) in area(s) of specialization. Send curriculum vitae, statements of teaching and research interests, and three letters of reference to: **Dr. Rod Seeley, Chair, Department of Biological Sciences, Idaho State University, Pocatello, ID 83209.** Review of credential will start on 15 December 1990 and the search will continue until the position is filled. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR INSECT PHYSIOLOGY

The Department of Entomology, Cornell University, invites applications for an assistant professor of insect physiology. The position involves 70% research/30% teaching. Responsibilities include development of a vigorous research program in any aspect of insect physiology. Opportunities exist for collaboration in vertebrate and invertebrate physiology, molecular biology, entomology, and related fields. Teaching includes primary responsibility for an upper-level course in insect physiology and a graduate seminar in his/her area of expertise. Qualifications: Ph.D. in entomology, zoology, or related field. Postdoctoral or similar experience desirable, but not essential. This is a 12-month, professional, tenure-track position in a large department with diverse strength in basic and applied areas of research. Full position description available on request. Application deadline is 15 January 1991. Position is available on or after 1 July 1991. Applicants should forward (i) letter describing qualifications and interest in position; (ii) curriculum vitae; (iii) list of publications (include reprints), (iv) transcripts (post secondary education); and (v) names and addresses of three to five references. Send application to: **Dr. Quentin D. Wheeler, Chairman, Department of Entomology, Comstock Hall, Cornell University, Ithaca, NY 14853-0999. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ASSISTANT PROFESSOR, OPTOMETRY

M.S. or Ph.D. degree in anatomy or physiological optics. O.D. degree or equivalent is desirable. Teaching and research experience in anatomy and/or physiological optics. Potential to generate and sustain an independent research program. Teaches graduate-professional students in areas of anatomy including gross, histological, and head/neck/ocular anatomy; prepares grant proposals and conducts research of a quality to attract federal grants; and contributes to the service duties of the college. Starts 15 September 1991. Salary: \$38,000 to \$42,000, 9-month appointment. Send curriculum vitae, statement of teaching experience, research plans, and three letters of reference to: **Dr. John P. Schoessler, Chair, Search Committee, College of Optometry, The Ohio State University, 338 West Tenth Avenue, Columbus, OH 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.**

VERTEBRATE BIOLOGIST. Furman University has a tenure-track **ASSISTANT PROFESSOR** position in fall of 1991 for a person working with vertebrates and able to teach a course in comparative anatomy and embryology of chordates. Other teaching assignments include introductory biology courses and upper level undergraduate courses matching one's interests. Candidates must have the Ph.D. degree, a strong interest and ability in teaching, and a commitment to involving undergraduate students in an active research program. Furman is a selective liberal arts school of 2500 students, with a vigorous program in the sciences. Submit curriculum vitae, original or photostatic transcripts, a statement describing areas of teaching competency and research interests, and three letters of recommendation to: **Dr. John Snyder, Search Committee, Department of Biology, Furman University, Greenville, SC 29613.** Application deadline is 31 December 1990. *An Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST/BOTANIST. The University of Richmond invites applications for a tenure-track position in biology at the **ASSISTANT PROFESSOR** level. The appointee will be responsible for undergraduate introductory courses in microbiology and botany. In addition, development of advanced undergraduate and M.S.-level courses in microbiological areas of his/her specialty will be expected. Preference will be given to those who will develop an active research program in plant microbial interactions and will involve undergraduate students. Candidates must have the Ph.D. degree and postdoctoral experience is desirable. Submit résumé, undergraduate and graduate transcripts, a statement of research plans, and three letters of reference to: **Dr. F. B. Leftwich, Department of Biology, University of Richmond, VA 23173.** Consideration of applications will begin on 15 December 1990. *The University of Richmond is an Equal Opportunity/Affirmative Action Employer and encourages application from women and minority candidates.*

UNIVERSITY OF SOUTH FLORIDA

The University of South Florida Geology Department seeks applications for three **ASSISTANT PROFESSOR** positions to be filled for fall of 1991: (i) hard-rock geologist, teach structural geology; (ii) soft-rock geologist, teach sedimentary petrology; and (iii) open specialty. Ph.D. must be completed at time of appointment. Filling the third position is contingent on availability of expected funds.

Send description of research/teaching interests, curriculum vitae, and names, addresses, and phone numbers of five references to: **H. L. Vacher, Search Committee Chairman, Department of Geology, University of South Florida, Tampa, FL 33620.** Application deadlines: 15 December 1990 for first two positions; 15 January 1991 for third position.

The University of South Florida is an Affirmative Action/Equal Opportunity Institution. Applications from women and minority candidates are strongly encouraged.

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POSITIONS OPEN

GENETICS, ASSISTANT PROFESSOR. Indiana University at South Bend invites applications for a Ph.D. level tenure-track position in genetics beginning August 1991. Research expected. Teaching responsibilities include genetics lecture/laboratory, introductory biology courses. Deadline for applications is 31 December 1990 or until position is filled. Send résumé, transcripts, and three letters of recommendation to:

**Dr. Earl Savage, Biology
Indiana University at South Bend
P.O. Box 7111
South Bend, IN 46634**

Affirmative Action/Equal Opportunity Employer.

PHYSIOLOGIST: ASSISTANT PROFESSOR. The Department of Biology, State University of New York (SUNY) College at Fredonia, invites applications for a tenure-track position available the end of August 1991. Qualifications include a Ph.D. in biological sciences and a commitment both to undergraduate instruction and to research. Experience in animal physiology is required. Primary teaching responsibilities include courses in anatomy and physiology; however, teaching other courses will be required based upon background, interest, and need. Send applications to: **Physiologist Search Committee, Department of Biology, SUNY College at Fredonia, Fredonia, NY 14063.** Application deadline is 11 January 1991. *SUNY Fredonia is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ASSISTANT PROFESSOR BOTANY

The Department of Biological Sciences at Idaho State University invites applications for a 9-month, tenure-track faculty position in botany beginning fall 1991. Candidates must have an earned doctorate. The successful candidate will teach general botany and supervise general botany laboratory, instruct in plant morphology and plant anatomy, and supervise graduate students. Excellence in teaching and the development of an active research program are expected. Candidates with expertise in developmental morphology or functional plant anatomy are particularly encouraged to apply. The position will remain open until filled, but applicants should send curriculum vitae, statements of teaching and research interests, transcripts, and three letters of recommendation by 15 December 1990 to: **Botany Search Committee, Department of Biological Sciences, Idaho State University, Pocatello, ID 83209. Idaho State University is an Equal Opportunity/Affirmative Action Employer.**

MARINE MICROBIAL ECOLOGIST

The Department of Biological Sciences at the University of California, Santa Barbara, seeks applicants for a tenure-track faculty position for research and teaching at the **ASSISTANT PROFESSOR** level in modern marine microbial physiological ecology, effective 1 July 1991. Candidates are sought with research interests, experience, and accomplishments combining a contemporary molecular approach with inquiry into the ecological role and adaptations of prokaryotic microorganisms to marine environments. Possible areas of research might include, but need not be confined to: archaeobacteria, vent community microorganisms, symbiotic bacteria, cyanobacteria, methanogens, bio-geochemical cycling, trophic interactions, genetic regulation of productivity, etc. Teaching responsibilities will include instruction in marine microbial ecology at the undergraduate level and marine microbial biology or biotechnology at the graduate level. The Department of Biological Sciences is a large, broad-spectrum department with major strengths in marine biology, biological oceanography, limnology, molecular and cellular biology, ecology, and evolution. Unique facilities for research with marine organisms are available within the department, including a new marine biotechnology laboratory building in which the successful candidate will be accommodated. Applicants who have completed at least 1 year of postdoctoral research will be preferred. Interested candidates should submit curriculum vitae, three letters of recommendation, three to five relevant publications, and a statement of research interests to: **Chairman, Department of Biological Sciences, University of California, Santa Barbara, CA 93106.** Deadline for submission of completed applications is 31 January 1991. *The University of California is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (IRCA 1986).*

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1991 AAAS EMPLOYMENT EXCHANGE

to be held at the AAAS Annual Meeting
in Washington, DC, February 15-18, 1991
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The American Association for the Advancement of Science is pleased to provide, at the upcoming Annual Meeting, the perfect forum for prospecting scientific employers and candidates to meet and interview on-site.

If you're an experienced scientist at the pivotal point in your career, a college

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For more information and registration forms contact: Jacquelyn Roberts, AAAS
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MAMMALIAN CELL MOLECULAR GENETICIST

The newly reorganized **Department of Microbiology and Molecular Genetics** and **The Markey Center for Molecular Genetics** at the University of Vermont is continuing to expand its research base in molecular biology. A tenure track position at the assistant professor level is available in the area of molecular genetics related to mammalian cells and viruses. Areas of interest include, but are not limited to, (1) molecular virology, (2) fundamental mechanisms of DNA replication, recombination, gene expression, or protein synthesis, and (3) mechanisms of cell growth and differentiation. The candidate should be trained in genetics and molecular biology, and utilize modern approaches to problems of eukaryotic cell biology at the molecular level. A Ph.D. and postdoctoral experience are required. The expanded Department will occupy four floors in a new Microbiology Center. Start-up funds and interim renovated space are available. Faculty members hold appointments in both the College of Agriculture and Life Sciences and the College of Medicine. The primary emphasis is on research; teaching responsibilities are to undergraduate, graduate and medical students. Research interests center on basic problems in molecular genetics with several groups focusing on cell and molecular biology of mammalian cells.

Send nominations and applications with curriculum vitae, present and future research plans and at least three letters of reference to:

Search Committee
Department of Microbiology and Molecular Genetics
Given Building
University of Vermont
Burlington, VT 05405

Review of applications will begin immediately and continue until the position is filled. Women and minorities are encouraged to apply. The University of Vermont is an Equal Opportunity/Affirmative Action Employer.

VISITING POSITIONS AT THE AHPCRC

UNIVERSITY OF MINNESOTA

Army High Performance Computing Research Center (AHPCRC)

The AHPCRC is an interdisciplinary research program in high performance computing. The Center research activities are carried out by faculty interested in scientific computing from various fields of engineering, physical sciences, computer science and mathematics. The current computational resources include a 32,000-node Connection Machine, and a Graphics and Visualization Laboratory; and there is access to a Cray-2/4-512 and a Cray X-MP/4-16. Those interested in participating in the research activities of the center as postdoctoral or senior fellows are invited to apply.

POSTDOCTORAL FELLOWS We are currently inviting applications for appointments beginning September 1991, but alternative starting dates may be requested. (The appointment title for these positions is: Research Associate). All requirements for a doctorate must be completed prior to the starting date. The materials listed below must be received by January 15, 1991:

1. Description (maximum 2 pages) of research background and plans for participating in an AHPCRC research project (a description of project opportunities available at the AHPCRC can be requested; please refer to the document "Research Opportunities for AHPCRC Visiting Fellows").
2. Curriculum vitae including list of publications.
3. Three letters of recommendation, to be sent directly to the AHPCRC.

SENIOR FELLOWS Preference will be given to providing supplementary support for those with sabbaticals, fellowships, or other stipends. (An alternative title for these positions is: Visiting Faculty).

All correspondence should be directed to:

Visiting Fellows Coordinator
University of Minnesota
Army High Performance Computing Research Center
FMC Technology Center
1300 South Second Street
Minneapolis, Minnesota 55454

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



DEPARTMENT OF PHARMACOLOGICAL AND

PHYSIOLOGICAL SCIENCE

SAINT LOUIS UNIVERSITY MEDICAL CENTER

Applications are invited for up to six new positions to be filled over the next three years in the newly created **Department of Pharmacological and Physiological Science** at Saint Louis University Medical Center. Positions are tenure track appointments at the **Assistant Professor** or **Associate Professor** level. At the **Assistant Professor** level, the candidate should have a period of productive post-doctoral training and will be expected to develop a strong, independent, fundable research program; and participate in medical, allied health and graduate student teaching. At the **Associate Professor** level, the candidate should have a record of peer reviewed grants, research publications and participation in teaching. Preference will be given, but not restricted, to individuals with demonstrated experience in the application of molecular biology to research in the nervous, cardiovascular or endocrine systems. We offer an environment rich in senior level scientific experience, start up funds, laboratory space and a record of highly successful and continuing extramural research and training funding. Interested persons should send a curriculum vitae and bibliography, record of grant support, a statement of research interests and objectives, and letters from at least 3 references to:

Dr. Thomas C. Westfall
William Beaumont Professor and Chairman
Department of Pharmacological and Physiological Science
St. Louis University Medical Center
1402 South Grand Boulevard
St. Louis, MO 63104

St. Louis University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

Director Of Pharmaceutical Development

The Liposome Company, a growing biotechnology firm specializing in novel, lipid-based drug delivery systems, is offering a challenging opportunity for an experienced hands-on professional to direct its pharmaceutical development staff.

Responsibilities will include contributing to the manufacturing section of IND's and NDA's, evaluating stability of our products in various packages, conducting pre-formulation and formulation studies and managing the clinical supplies area as well as the transfer of technology to the Manufacturing and Process Development groups.

The successful candidate must possess experience in parenteral formulations, handling of aseptic materials, preformulation/formulation, manufacturing of clinical supplies and performing stability studies to support leading drug candidates.

Requirements include a Ph.D. in Pharmaceutical Science, Biochemistry, Pharmacology or a related discipline, plus a minimum of 10 years experience in the Pharmaceutical/Biotech industry preferably in the development of sterile products. Knowledge of GLP/GMP procedures is essential. Proven track record of managerial and interpersonal skills is also required.

We offer a competitive salary, comprehensive benefits, generous stock options and a creative work environment for professional performance and growth. Qualified candidates should send their resumes to:

**The Liposome
Company Inc**

ATTN: Ms. Debra Pascale
One Research Way
Princeton, NJ 08540

We are an equal opportunity employer

Reopening Search for Director Marine Resources Research Institute

The Marine Resources Research Institute conducts applied research within the Division of Marine Resources of the South Carolina Wildlife and Marine Resources Department. The state supported Institute also provides research support for other state agencies with marine-related regulatory responsibilities. The three major areas of research concentration are in fisheries, environmental studies, and aquaculture.

The Institute, with a staff of 10 Ph.D. scientists, 24 senior M.S. level biologists and 33 associated technical and support staff, operates on state-appropriated (\$1,645,000) and grant-supported extramural funds (\$1,831,000). The selected candidate will supervise the daily operation of the Institute, develop and implement its annual budget, and initiate research programs.

In addition to overseeing a diverse multidisciplinary research effort, the candidate must demonstrate a commitment to education in the marine sciences and be able to attain faculty standing within the State's university and college community.

We seek an experienced Ph.D. researcher with ten or more years of experience and demonstrable communication and leadership skills, as well as a record of increasing responsibility as a research manager.

Salary and benefits are competitive and based on experience. For an application package, please contact Ms. Anita Mitchum, Personnel Officer, Division of Marine Resources, P.O. Box 12559, Charleston, S.C. 29412 or call (803) 762-5035. Deadline for receipt of completed applications is December 20, 1990.

Minority applicants are encouraged
to apply as we are an equal opportunity employer.



SWISS FEDERAL INSTITUTE OF TECHNOLOGY- LAUSANNE

announces the opening in the Department
of Chemistry for a

PROFESSOR IN ELECTROCHEMICAL KINETICS

oriented towards:

ANALYTICAL ELECTROCHEMISTRY, ELECTRODICS

The appointment can begin summer 1991
or later. The deadline for applications is
January 31, 1991.

Interested persons should ask for the
application form to:

Secrétariat général
Ecole polytechnique fédérale de
Lausanne
CE-Ecublens
CH-1015 Lausanne/Suisse

BETH ISRAEL BOSTON

Technical Director, Transgenic Mouse Facility

Beth Israel, a 504-bed, major Harvard Teaching Hospital, is seeking a Technical Director for our newly established Transgenic Mouse Facility. This individual will be responsible for the operation of a multi-user facility, and will have the opportunity to interact with several investigators working on a number of medically related research projects. Experience and proven ability to produce transgenic mice are necessary. A working knowledge of embryonal stem cell technology would also be desirable.

This position offers a highly competitive salary commensurate with experience.

Interested applicants should send their CV and
three letters of reference to: Rodney Hines,
Human Resources, Beth Israel Hospital,
330 Brookline Avenue, Boston, MA 02215.



Beth Israel Hospital Boston

An Equal Opportunity Employer M/F

POSITIONS OPEN

The Department of Chemistry and Biochemistry at Concordia University, Montreal, has openings for biochemists or medicinal chemists at the **ASSISTANT PROFESSOR** level (tenure track) or at a senior level. We will consider candidates in any area of modern biochemistry but are especially interested in individuals with research interests in biophysics, membranes, protein chemistry, metabolism, or enzymology. The successful candidates will be required to establish a research program that will attract external funding and to teach biochemistry at both the undergraduate and graduate level. Concordia University is predominantly an English university located in downtown Montreal. All qualified individuals are encouraged to apply, but, in accordance with Canadian immigration requirements, this advertisement is directed primarily to citizens and permanent residents of Canada. Applicants should send a résumé and outline of proposed research and should arrange for three letters of reference to be sent directly to:

Dr. P. H. Bird, Chairman
Department of Chemistry and Biochemistry
Concordia University
1455 de Maisonneuve Boulevard, West
Montreal, Quebec H3G 1M8, Canada

Applications completed before 31 December 1990 will be given preference.

Concordia University is committed to Employment Equity.

DEPARTMENT OF ANATOMY JAMES H. QUILLEN COLLEGE OF MEDICINE EAST TENNESSEE STATE UNIVERSITY

CELL/DEVELOPMENTAL BIOLOGIST. Applicants are invited for the position of **ASSISTANT PROFESSOR** of anatomy. Candidates should possess either the M.D. or Ph.D. degree. Preference will be accorded those candidates with postdoctoral training and with documented research expertise in either cell biology, developmental neurobiology, or developmental biology. The successful candidate will be expected to participate in the education program for medical students, although the specific discipline will be commensurate with the career interests of that individual. The department has eight faculty members whose interests represent a diverse mixture of research areas. These include: neurobiology, neurotoxicology, developmental toxicology, and cell biology. They participate in the Graduate Program in Biomedical Science and in the multidisciplinary program in molecular biology. The position will be available on or before 1 July 1991. Interested applicants should submit curriculum vitae and the names of at least three references to: **Richard G. Skalko, Ph.D., Professor and Chairman, Department of Anatomy, James H. Quillen College of Medicine, East Tennessee State University, Johnson City, TN 37614.**

East Tennessee State University is an Affirmative Action/Equal Opportunity Employer.

COLBY COLLEGE

BIOCHEMIST. The Chemistry Department of Colby College invites applications for a tenure-track position in biochemistry, at the **ASSISTANT OR ASSOCIATE** level, commencing 1 September 1991. Well-qualified female applicants will also be considered for one of the college's Clare Boothe Luce Chairs for women scientists. The candidate should have a Ph.D. in biochemistry or related discipline with a strong chemistry background and interest in teaching undergraduates; research involving undergraduates is strongly encouraged. The successful applicant will teach a portion of the three-semester biochemistry sequence and participate in other departmental offerings, possibly including general chemistry or a course for nonscience majors. Colby is recognized for excellence in undergraduate education and for close student-faculty interaction. The chemistry department is well equipped with modern instrumentation, and start-up equipment funds are available. Curriculum vitae, transcripts, statements of teaching and research interests, and three letters of recommendation should be sent to: **Professor Thomas W. Shattuck, Chair, Department of Chemistry, Colby College, Waterville, ME 04901.** The closing date for completed applications is 15 December 1990. *Colby is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and minorities.*

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POSITIONS OPEN

ASSISTANT PROFESSOR, MEDICAL HISTOLOGY. Ohio University. Tenure-track position, beginning fall of 1991, to participate in team teaching of the microanatomy course to medical students and to teach in the undergraduate anatomy curriculum. Minimum salary: \$30,000. Candidates must have a Ph.D. degree with at least 1 year of postdoctoral experience; experience in teaching medical histology is highly desirable. The research area is open, but we are particularly interested in a developmental biologist. The department has 46 faculty members, 75 graduate students, and teaches undergraduate, graduate, and medical students; there are interdisciplinary programs in neurobiology and molecular and cellular biology. Please send curriculum vitae, statement of research and teaching interests, and three letters of recommendation by 20 December 1990 to: **Jean Witkowski, Department of Zoological and Biomedical Sciences, Ohio University, Athens, OH 45701.**

Ohio University is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST, ASSISTANT PROFESSOR. The Union College Biology Department invites applications for a tenure-track position from individuals trained in any area of modern biochemistry; those working with plant or microbial systems are particularly encouraged to apply. Teaching responsibilities will include participation in the biochemical portions of the introductory sequence and upper-level biochemistry courses. Candidates must have a Ph.D.; postdoctoral experience is highly desirable and a strong commitment to excellence in both teaching and research is essential. A major grant from the Howard Hughes Medical Institute will provide the successful candidate, during the first year, with funds for major equipment and supplies, a reduced teaching load, and a summer research stipend. Union College is a small, selective undergraduate institution with a long history of strength in science and engineering. Its Biology Department is diverse and has 13 full-time faculty. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. George Butterstein, Chair, Department of Biological Sciences, Union College, Schenectady, NY 12308.** *Union College is an Equal Opportunity/Affirmative Action Employer.*

NEUROANATOMIST INDIANA UNIVERSITY SCHOOL OF MEDICINE MUNCIE CENTER FOR MEDICAL EDUCATION AT BALL STATE UNIVERSITY MUNCIE, INDIANA

Applications are currently being accepted for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. The responsibilities of the position include teaching neuroanatomy to first-year medical students, assisting in the gross anatomy course, and development of an active independent research program. Applicants are expected to have postdoctoral experience, and demonstrate research capability and a commitment to excellence in teaching. Rank and salary will be commensurate with experience. Deadline for applications is 15 January 1991. Send curriculum vitae, a brief summary of research and teaching experience, and the names of three references to: **Dr. Douglas A. Triplett, Director, Muncie Center for Medical Education, Ball State University, Muncie, IN 47306.**

Ball State University Practices Equal Opportunity in Education and Employment.

ASSOCIATE OR FULL PROFESSOR RADIOLOGICAL HEALTH

The Department of Environmental Health, University of Washington School of Public Health invites applications for a faculty position in its radiological health program. Applicants must have an earned doctorate in the radiation sciences or related fields. Prior academic experience is desirable, although not required. Responsibilities of this position include developing a sustained program of funded research, teaching graduate level courses, and supervision of masters and doctoral students. Submit curriculum vitae and names and addresses of three references by 1 February 1991 to: **Dr. Harvey Checkoway, Department of Environmental Health, SC-34, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMISTRY ASSISTANT/ASSOCIATE PROFESSOR

The Department of Biology, Hamilton College, invites applications for a tenure-track position at the assistant/associate professor level, effective 1 July 1991. Applicants must have a Ph.D. degree in biochemistry or closely related discipline. Postdoctoral training and teaching experience are expected. The successful applicant will teach an upper level course in general biochemistry; team-teach an introductory biology course in cell structure and chemistry; develop a course in an area of interest; and co-direct the interdepartmental biochemistry/molecular biology program. Appointment at the higher rank requires evidence of quality teaching at the undergraduate level and an ongoing research program compatible with an undergraduate institution. Send curriculum vitae, statements of teaching and research interests, and names and addresses of three references to: **David A. Gapp, Chair, Biology Department, Hamilton College, Clinton, NY 13323.** Applications must be received by 1 January 1991. *Women and members of minority groups are encouraged to apply. Hamilton College is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR ANATOMY AND CELL BIOLOGY

The Department of Anatomy and Cell Biology, State University of New York, Health Science Center, Syracuse, invites applications for a tenure-track position at the level of assistant or associate professor. Applicants should have a Ph.D. or M.D. degree and a minimum of 2 years of postdoctoral research experience. The department is seeking an individual with a strong record of scientific achievement using modern approaches in cell and molecular biology to add to existing institutional strengths. These include neurobiology, cytoskeletal function, and mechanisms of development. Teaching opportunities will exist in medical and/or graduate courses. The position provides an extremely competitive salary and generous set-up funds. Interested individuals should send a copy of their curriculum vitae, recent reprints, and three letters of reference by 15 January 1991 to: **Dr. Larry F. Lemanski, Professor and Chairman, Department of Anatomy and Cell Biology, State University of New York, Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210.** *The State University of New York, Syracuse, is an Equal Opportunity/Affirmative Action Employer.*

BIO-ANALYTICAL CHEMISTRY. The Department of Chemistry at Trinity College invites applications for a tenure-track position in bio-analytical chemistry to begin 1 September 1991. Candidates should have a Ph.D. in analytical chemistry and be prepared to teach courses in analytical chemistry, instrumental analysis, introductory chemistry, and neurochemistry. The successful candidate should also be prepared to participate in the college's neuroscience program. Research with undergraduate student participation is expected. Institutional support for research will be provided. The department has excellent, modern instrumentation including, GC-LC-MS, AAS, and a 300-MHz NMR. The chemistry department is certified by the American Chemical Society and offers majors in chemistry and biochemistry. Applications from members of groups affected by affirmative action guidelines are strongly encouraged. Send a detailed curriculum vitae, transcripts, three letters of recommendation, and a brief description of research plans to: **Dr. David E. Henderson, Chairman, Department of Chemistry, Trinity College, Hartford, CT 06106.** *An Affirmative Action/Equal Opportunity Institution.*

IMMUNOLOGIST FORDHAM UNIVERSITY

Individuals are invited to apply for a tenure-track position at the **ASSOCIATE PROFESSOR** level. The department has an active research program and provides excellent physical facilities, state-of-the-art equipment, a stimulating research environment, start-up funds and competitive salaries and benefits. Candidates should possess expertise in the area of immunology and have an ongoing grant-supported research effort under way. The appointee will be expected to establish an active research program and participate in teaching at the graduate and undergraduate levels. Please submit curriculum vitae, a statement of research goals, and the names and addresses of three references to: **Dr. Berish Y. Rubin, Chairman, Department of Biological Sciences, Fordham University, Bronx, NY 10458.**



DEAN, COLLEGE OF AGRICULTURAL SCIENCES UNIVERSITY OF DELAWARE

Applications and nominations are invited for the position of Dean of the College of Agricultural Sciences. The Dean also holds the position of Director of the Delaware Agricultural Experiment Station. The Director of the Delaware Cooperative Extension reports to the Dean.

The University of Delaware is a state-assisted, land-grant, sea-grant research university with more than 20,000 students and 860 faculty members. The University's central mission is the promotion of academic excellence in an environment of equal opportunity. It is located in Newark, a pleasant college town of 26,000 inhabitants, conveniently situated 15 miles from Wilmington, and halfway between New York City and Washington, D.C.

The College of Agricultural Sciences consists of six academic departments, farms, special programs, faculty of 66, and 620 undergraduate and 73 graduate students.

The Dean is the chief academic officer with budgetary responsibility for the College and its related functions. The duties of the Dean shall include, but not be limited to, defining and articulating the College's overall objectives, its educational, research and service philosophies. The Dean reports directly to the Provost and Vice President for Academic Affairs.

The candidates must have significant academic experience in a discipline appropriate to the appointment at the rank of professor within the College. Candidates should present a record of academic or related administrative experience and appreciation and understanding of the land grant system and philosophy. Applicants should demonstrate a commitment to affirmative action, working in concert with College personnel and client groups.

It is anticipated that the successful applicant will assume the position on or about July 1, 1991. Compensation is competitive. Nominations and applications should be submitted to: **A.R. Doberenz, Chair, Search Committee, 106 Alison Hall, University of Delaware, Newark, DE 19716.**

The screening of candidates will begin on December 1, 1990. Applications received by December 1 will be considered.

The University of Delaware is an equal opportunity employer which encourages applications from minority group members and women.

THE ROYAL SOCIETY

ROYAL SOCIETY UNIVERSITY RESEARCH FELLOWSHIPS

Applications are invited for about 30 Royal Society University Research Fellowships tenable in the first instance for five years from 1 October 1991 (or slightly later in the academic year 1991-92), with two possible further renewals for three and then two years. The Fellowships are available in any branch of science, including agriculture, medicine, mathematics, engineering and technology. The primary criterion for selection will be scientific merit based on record so far and on future potential. Some account will also be taken of the facilities and intellectual environment being offered by the prospective host department. Salaries will be on the nonclinical university scale, with London Allowance where appropriate. Annual research expenses (a sum of up to £10000 may be sought in 1991-92) will be available, together with return travel and a contribution to baggage costs for successful applicants from overseas and their families.

Applicants should be Scientists normally with between 3 and 10 years of post doctoral research experience. They must be British Citizens and propose to hold the fellowships in universities or polytechnics in the United Kingdom. Those who already have substantive posts in these places will not normally be considered. Previously unsuccessful applicants are welcome to apply again if still eligible, but should make fresh applications and arrange for updated referee's statements.

Application details are available (on written request only) from Mrs. U. M. A. Tokle, The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG (FAX: 071-930 2170). Closing date 15 February 1991. Application forms will not be available after 1 February and no application arriving after 4 p.m. on 15 February will be considered.

Public Health Service • National Institutes of Health
National Cancer Institute

A Senior Executive Service Vacancy

DEPUTY DIRECTOR

DIVISION OF CANCER TREATMENT

Location: Bethesda, Maryland

The Deputy Director will be responsible for the planning, direction, coordination, conduct, evaluation, and effective modifications of a broad range of national and international programs designed specifically to maintain a continuous flow of material from laboratory to clinic for the treatment of cancer and AIDS. This includes assisting the Director in the conceptualization, design, and implementation of both short-term and long-term plans relating to the integrated preclinical and clinical research program of the Division involving intramural staff projects and extramural contract and grant-supported projects and acting on behalf of the Director in the Director's absence. The Division of Cancer Treatment, NCI, is comprised of approximately 600 employees and has a budget of approximately \$450 million.

This is a Civil Service position in the Senior Executive Service (SES) with an annual salary compensation between ES-1 through ES-4 (Currently \$71,200 to \$79,200). In addition, physicians may be eligible for a Physician's Comparability Allowance up to \$20,000 per year. (Applicants alternatively may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one-year probationary period.

Applicants must meet the minimum educational requirements for Medical Officer, GS-602. Applicants must further meet established mandatory professional/technical and managerial/executive requirements. Applicants will be further evaluated on the degree to which they possess additional desirable qualifications in the areas of professional/technical qualifications, managerial/executive qualifications, scientific reputation/peer recognition, training and education, and honors and awards. A copy of the requirements may be obtained by contacting Ms. Sue Hickman in the Personnel Management Branch, NCI, at (301) 496-8182.

Applications for Federal Employment (SF-171) are to be sent to the above individual at:

**The National Cancer Institute
Personnel Management Branch
9000 Rockville Pike
Building 31, Room 3A16
Bethesda, Maryland 20892**



A current curriculum vitae and bibliography must accompany all applications for entrance into SES. Resumes are not acceptable applications for entrance into the SES. Public Health Service Commissioned Officers wishing to enter the SES must follow the above procedures. Officers interested in performing the duties of the position *within the Commissioned Corps* may submit a resume to the above address.

Applications must be received by November 23, 1990.

* Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color, religion, sex, national origin, politics, marital status, physical or mental handicap, age, or membership or non-membership in an employee organization.

AN EQUAL OPPORTUNITY EMPLOYER

RESEARCH OPPORTUNITY FOR MEDICAL STUDENTS

HHMI-NIH RESEARCH SCHOLARS AT THE NATIONAL INSTITUTES OF HEALTH (CLOISTER PROGRAM)

The Howard Hughes Medical Institute (HHMI) and the National Institutes of Health (NIH) announce that applications are being accepted for the 1991-92 class of Research Scholars.

Under this joint program, students who are United States citizens or permanent residents attending medical schools in the United States or Puerto Rico are selected to spend a year of intensive laboratory research at the NIH in Bethesda, Maryland. The program year will begin in the summer of 1991.

Scholars are paid as HHMI employees and are housed at The Cloister, a residence on the NIH campus.

Deadline for applications is **January 15, 1991.**

Students will be notified of results by **April 1, 1991.**

Brochures and application kits are available in the deans' offices of medical schools; they may also be obtained by writing or calling:

Howard Hughes Medical Institute
One Cloister Court
Bethesda, MD 20814-1460
Telephone: (301)951-6710 or (800)334-6301

The Howard Hughes Medical Institute, an Equal Opportunity Employer, welcomes applications from all qualified candidates and encourages women and members of minority groups to apply

Trustee Professorship in Pharmacology University of Pennsylvania School of Medicine

The Department of Pharmacology at the University of Pennsylvania is seeking an outstanding investigator to fill a Trustee Professorship. This investigator must be a leader in his/her area of expertise and must command an international reputation. The individual must use state-of-the-art techniques for the elucidation and manipulation of the structures of bio-active molecules. Expertise might include the rational design of receptor ligands and enzyme inhibitors utilizing computer-assisted molecular modeling, NMR and synthetic chemistry or the use of MS to study either peptide structure or an area of drug, carcinogen or arachidonic acid metabolism. The professor will be given newly renovated space, significant seed money and guaranteed salary support. Applicants should submit a CV and the addresses of three references to: **Trustee Professor Search Committee, Department of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6084.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH SCIENTIST GENETIC TOXICOLOGY

The Upjohn Laboratories Division of The Upjohn Company is seeking candidates for the position of Research Scientist in our Investigative Toxicology/Drug Safety Group.

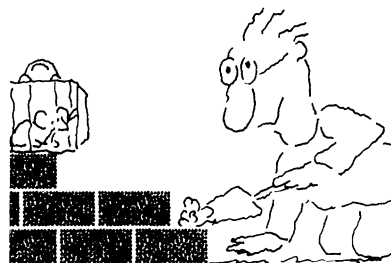
As a member of a multi-disciplinary research team, the selected scientist will conduct studies of the potential for genetic effects of drug compounds and chemicals and supervise an ongoing program in genetic toxicology testing. Duties will include in-house testing and contract testing, some scientific-level interaction with regulatory agencies, as well as planning, executing, interpreting and evaluating genetic toxicology research. Extensive interaction with discovery research scientists is a very important element in this position. The incumbent will conduct hands-on laboratory research and be expected to publish regularly. A PhD with Post Doctoral experience in genetics, genetic toxicology, zoology, toxicology or related field, and experience with intimate knowledge of available genetic toxicology assays, world-wide regulatory requirements and excellent interpersonal skills are needed for this position.

Upjohn offers a very competitive compensation and benefits package in addition to a stimulating, multi-disciplinary research environment at our modern laboratories, located in downtown Kalamazoo, Michigan. Our region provides immediate access to abundant cultural and recreational pursuits and offers reasonable housing and living costs. Qualified applicants are invited to submit their CV's, cover letters and relevant materials to: The Upjohn Company, Corporate Recruiting/Position 5717-HA, Kalamazoo, MI 49001-0199. Refer to position number 5717-HA in your correspondence. An equal opportunity employer M/F.

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Upjohn

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New Lab Service Department
1515 Broadway
New York, NY 10036

The Global Weekly of Research
SCIENCE

**UNIVERSITY OF ALABAMA AT BIRMINGHAM
SCHOOLS OF MEDICINE AND DENTISTRY**

**CHAIRMAN
DEPARTMENT OF BIOCHEMISTRY**

The University of Alabama Schools of Medicine and Dentistry, UAB, are seeking applications and nominations for the position of Professor and Chairman of the Department of Biochemistry. The person filling this position will assume the leadership of a strong, mature faculty, and will have an opportunity to expand the department in new directions. The department's research and office space is located in a basic science building completed in 1985, with additional laboratories and offices at several other locations on the UAB campus. New space will become available in a basic science building currently under construction, to be completed in the Summer of 1992. The department includes 23 full-time, tenure track faculty members and a well-established graduate program with 55 trainees.

The applicant must have a Ph.D., M.D., or equivalent degree, be internationally recognized for research in biochemistry/molecular biology, 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 ongoing, independent, and well-funded research program.

The Search Committee, headed by B. R. Brinkley, Ph.D., Chairman of Cell Biology, will review the applications. Interested applicants should submit a curriculum vitae including the names of three references to:

Antonietta D. Hyche
Director of Academic Support Programs
University of Alabama at Birmingham
MEB 310E, UAB Station
Birmingham, Alabama 35294

An Equal Opportunity/Affirmative Action Employer.



ENTOMOLOGY SCIENTIST

Insect Behavior & Control

Within the state-of-the-art Research Center of Philip Morris U.S.A., you'll have the opportunity to make major contributions in applied research related to insect behavior and control. Your responsibilities will include 40% consulting and 60% applied research.

A PH.D. in entomology with experience in biochemistry/physiology and insect control is preferred. Strong interpersonal skills are expected.

Discover a Fortune 50 Company's unique work environment where accomplishments are recognized and rewarded via a competitive salary and comprehensive benefits, including relocation assistance. Send your resume to: **F.X. Gilbride, Dept. #9055, PHILIP MORRIS U.S.A., P.O. Box 26603, Richmond, VA 23261.**

Philip Morris U.S.A. is an Equal Opportunity/Affirmative Action Employer and encourages minority and female applicants to apply.

Philip Morris U.S.A.

Staff Immunologist

An experienced scientist is sought to fill the position of Staff Immunologist in a laboratory investigating leukocyte adhesion molecules. The successful candidate will have a BS/MS or equivalent and some experience in immunology, cell biology, biochemistry and/or molecular biology. A facility with computer graphics, data bases and word processing is desirable. Duties will include cell culture, animal experimentation and a variety of immunological techniques. Good interactive and presentational skills are an advantage.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For consideration, send your resume and the names of three references to: **Human Resources Manager, Attn: Ad# 49, P.O. Box 2000, Rahway, NJ 07065.**

An equal opportunity/affirmative action employer



Merck & Co., Inc.



Agricultural Biotechnology Research Postdoctoral Associates

CIBA-GEIGY Agricultural Division's Biotechnology Research Unit in Research Triangle Park, NC offers exceptional postdoctoral opportunities to work with one of the foremost maize cell culture researchers in our Tissue Culture Department.

These positions will involve conducting research into the expression of selectable markers in maize tissue cultures and plants. As members of a multi-disciplinary interactive research unit in a well-equipped research facility, the successful candidates will have access to state-of-the-art maize transformation technology, and be able to take advantage of our considerable maize cell culture and molecular biology expertise.

Applicants must have a PhD, preferably with experience with gene expression in plants. Experience in plant cell culture would also be an advantage.

CIBA-GEIGY offers a competitive salary and generous company-paid benefits. Please forward a resume, including three letters of professional reference and reprints of any relevant published work, in confidence to: **Dr. Mary-Dell Chilton, CIBA-GEIGY Corporation, PO Box 12257, Research Triangle Park, NC 27709.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

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POSITIONS OPEN

DEVELOPMENTAL BIOLOGIST DEVELOPMENTAL NEUROBIOLOGIST

Tenure-track **ASSISTANT OR ASSOCIATE PROFESSOR** position open in fall of 1991 for a developmental biologist, preferably a developmental neurobiologist, working at the multicellular or systems level. Teaching responsibility will alternate among biology for nonmajors, introductory zoology, and a specialty course. Candidates must have Ph.D. with proven record of good teaching and research abilities. Screening will begin 15 January 1991 and continue until position is filled. Send curriculum vitae, four letters of recommendation, representative reprints, summary of teaching experience and description of research interests to: James N. Thompson, Jr., Department of Zoology, University of Oklahoma (OU), Norman, OK 73019. *An Equal Opportunity/Affirmative Action Employer. OU is responsive to needs of dual-career couples.*

MACROMOLECULAR CRYSTALLOGRAPHER UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Chemistry invites applications for a faculty position, either **ASSISTANT OR ASSOCIATE PROFESSOR** level, for the appointment effective fall of 1991. Applicant should have a Ph.D. degree or equivalent and extensive prior experience in x-ray crystallography of biological macromolecules. The faculty duties will include research in structural biology, supervision of graduate students and postdoctoral research fellows, and teaching at the undergraduate and graduate level. The successful candidate will be part of an expanding, interdisciplinary structural biology group at Berkeley that also includes members of the Department of Molecular and Cell Biology.

Applications should include a letter specifying qualifications and current research interests, curriculum vitae, a list of publications, two reprints, and the names and addresses (and telephone and FAX numbers if available) of persons whom we may contact for letters of recommendation. Applications will be processed as soon as they are received but should arrive no later than 31 December 1990. They should be addressed to: Professor Sung-Hou Kim, Melvin Calvin Laboratory, University of California, Berkeley, CA 94720.

The University of California is an Affirmative Action/Equal Opportunity Employer. We especially invite women and under-represented minorities to apply.

IMMUNOLOGIST, Ph.D.

Department of Surgery, University of California, San Diego (UCSD). Available 1 July 1991 to develop immunology laboratory in support of active clinical transplantation service. Emphasis on novel approaches to immunosuppression and immunologic monitoring. Ample opportunity will exist for developing basic research program. Opportunity to teach fellows and postgraduate students. Applicant should (i) have established reputation and track record of productivity, (ii) have experience and interest in developing cooperative clinical/basic science ventures, and (iii) be qualified for appointment at the **ASSOCIATE PROFESSOR** level. Closing date is 15 January 1991. Salary per published UC scale. Please send applications with curriculum vitae, selected publications, and the names of three references to: N. A. Halasz, M.D., UCSD Medical Center, H-810-A, 225 Dickinson Street, San Diego, CA 92103. *Affirmative Action/Equal Opportunity Employer.*

CHAIR DEPARTMENT OF BIOLOGICAL SCIENCES

Applications and nominations are invited for the position of chair of the Department of Biological Sciences at the University of South Alabama. The department has 18 faculty members and offers the B.S. and M.S. programs. Candidates should have a demonstrated commitment to research and teaching and show evidence of extramural funding. Prior administrative experience is desirable. The field of interest is open. Appointment level and salary will be commensurate with experience; starting date: 1 September 1991. Applicants should send curriculum vitae, names and addresses of three references, and a description of future professional goals to: Dr. John A. Freeman, Chair, Search Committee, c/o College of Arts and Sciences, University of South Alabama, Mobile, AL 36688. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CHAIR, DEPARTMENT OF ANATOMY

The University of Puerto Rico School of Medicine, a fully U.S.-accredited institution, is seeking applications and nominations for the position of chair of the Department of Anatomy. A proven record of scholarly activity, experience in attracting external research support, and good managerial skills are prerequisites. Current primary research strengths in the department include neurobiology and functional morphology. Applications should include curriculum vitae, a statement of career goals and research interests, and names of three references. Applications and nominations should be sent to: Search Committee, Department of Anatomy, University of Puerto Rico School of Medicine, G.P.O. Box 5067, San Juan, PR 00936.

Affirmative Action/Equal Opportunity Employer.

The Department of Psychology, Northwestern University, invites applications to serve as **CHAIR**. We seek an individual with an internationally recognized record of research who would provide leadership in the intellectual life of the department. The department has 20 full-time faculty members and expects to make seven additional junior and senior appointments within the next 3 years. The new chair would have an important role in recruiting faculty for these positions.

Members of the department work closely with the faculty in other departments and those associated with the Institute for Neuroscience and the Institute for Learning Sciences. Current research foci of the department include clinical, cognitive, psychobiology, personality, and social psychology.

Interested candidates should send a statement of research interests, administrative experience, curriculum vitae, copies of recent publications, and three letters of recommendation to: Department Search Committee, Department of Psychology, Northwestern University, Evanston, IL 60208-2710. *Northwestern University is an Equal Opportunity/Affirmative Action Employer. Hiring is contingent upon eligibility to work in the United States.*

POSITION IN NEUROSCIENCE UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN (UIUC)

The College of Liberal Arts and Sciences in cooperation with the Beckman Institute at the UIUC is continuing a major expansion of its programs in the neurosciences. A position (rank open and salary negotiable) is available in computationally oriented integrative and cognitive neuroscience for the 1991-1992 academic year. Applicants should have demonstrated exceptional promise in interdisciplinary research in one or more of the following areas: mechanisms of sensorimotor coordination and perception, modeling of neural networks, and cognitive neuroscience. Preference will be given to those who employ a computational approach to understanding neural systems. The successful candidate will have a primary appointment either in the Department of Physiology and Biophysics or in the Department of Psychology. There will also be opportunities for joint appointments with other units and participation in an excellent campus-wide Neuroscience Program.

The UIUC offers exceptional opportunities for the development of an academic research and teaching career. Graduate programs in life sciences, psychology, engineering, and computer science have long traditions of strength. The UIUC has excellent facilities for these areas of research and is home to numerous national centers for research, as well as the Beckman Institute for Advanced Science and Technology, where research is focused on interdisciplinary studies in physical and biological sciences. Successful candidates can expect to receive substantial start-up funds and laboratory facilities. The proposed starting date is 21 August 1991. Applicants are requested to submit curriculum vitae, reprints, and a summary of current and future research plans and to arrange for three letters of reference to be sent to: Professor Joseph Malpeli, Integrative/Cognitive Neuroscience Search Committee, Department of Psychology, 603 East Daniel Street, Champaign, IL 61820, telephone: 217-333-6605 by 15 January 1991. Applicants may be interviewed prior to 15 January, but all applications received by that date will receive full consideration.

The University of Illinois is an Affirmative Action/Equal Opportunity Employer. Applications from minority and female candidates are strongly encouraged.

POSITIONS OPEN

DIRECTOR PHYSIOLOGY

The Johns Hopkins University School of Medicine is seeking a scientist to lead the Department of Physiology. Applicants should have demonstrated leadership qualities and outstanding abilities in research and teaching.

Please send letter of application, curriculum vitae, and bibliography to:

John D. Stobo, M.D., Chairman
Physiology Search Committee
Johns Hopkins University School of Medicine and
The Johns Hopkins Hospital
1830 East Monument Street, Room 9026
Baltimore, MD 21205

An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION DEPARTMENT OF MOLECULAR BIOLOGY MASSACHUSETTS GENERAL HOSPITAL DEPARTMENT OF GENETICS HARVARD MEDICAL SCHOOL

The Department of Molecular Biology at Massachusetts General Hospital and the Department of Genetics at Harvard Medical School invite applications for a joint appointment at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. The laboratory will be located in the Massachusetts General Hospital Department of Molecular Biology and the faculty appointment will be in the Harvard Medical School Department of Genetics. *We encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, a statement of research plans, and three letters of recommendation. This material should be sent by 31 December 1990 to: Howard M. Goodman, Chief, Department of Molecular Biology, Wellman 11, Massachusetts General Hospital, Boston, MA 02114. *Harvard University and the Massachusetts General Hospital are Equal Opportunity/Affirmative Action Employer.*

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) DIVISION OF COMPARATIVE MEDICINE

MOLECULAR BIOLOGIST. Duties include conducting independent research and contributing to collaborative research projects; participating in the teaching and training of postdoctoral fellows; and providing diagnostic microbiology support for DCM's laboratory animal program.

REQUIREMENTS: a Ph.D. and postdoctoral research experience in the molecular and genetic aspects of bacterial diseases.

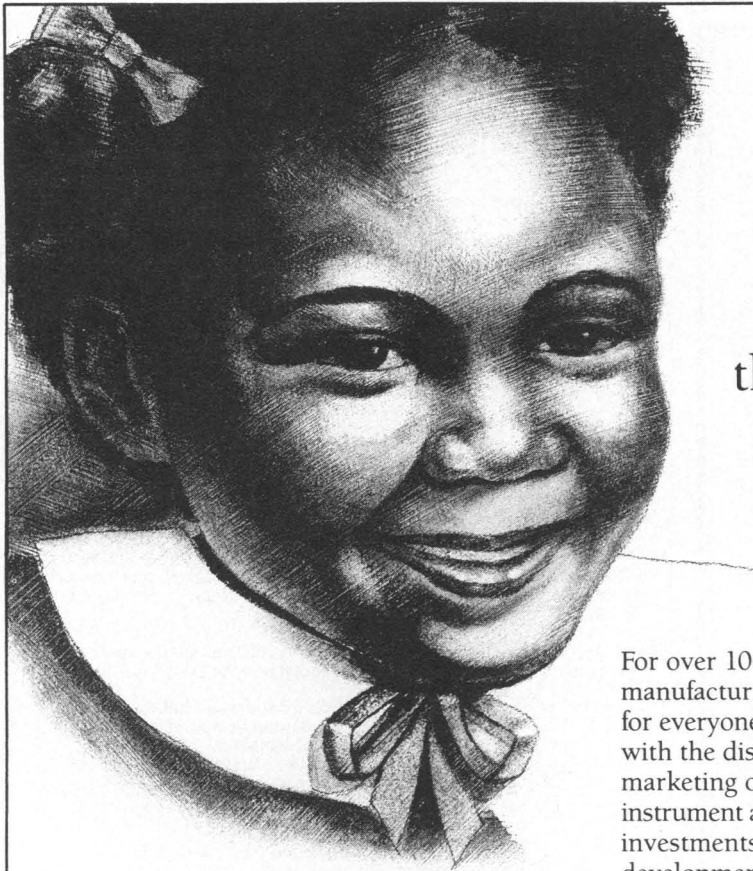
Applicants should submit curriculum vitae and summary of current research activities to: Dr. James G. Fox, MIT, Division of Comparative Medicine, 37 Vassar Street, Cambridge, MA 02139. *MIT is an Equal Opportunity/Affirmative Action Employer. MIT is a non-smoking environment.*

MEDICAL PHYSICS POSITION AVAILABLE

The Ottawa Regional Cancer Centre is seeking **MEDICAL PHYSICISTS** to participate in all aspects of clinical radiotherapy physics. The centre has three linear accelerators, three cobalt units, two simulators with three additional linear accelerators, and one simulator to be installed in the next 2 years. The centre is well-equipped with a host of other radiotherapy and physics equipment and has extensive electronic and machine shop facilities and support.

The medical physics program has a strong academic component operating through the Department of Physics and Radiology at Carleton University and University of Ottawa and includes a graduate medical physics program of 14 students. These programs are coupled with active research in radiotherapy and imaging physics as well as biophysics. The medical physics department of the Ottawa Regional Cancer Centre has eight physicists and provides excellent opportunities for research and academic activities. Appointments at each of the two universities are possible. Competitive salary is available and experience in radiotherapy physics is required. A Ph.D. in physics or equivalent is required and certification is an asset. Send applications to:

Dr. G. P. Raaphorst
Head of Medical Physics Department
Ottawa Regional Cancer Centre
190 Melrose Avenue
Ottawa, Ontario, Canada K1Y 4K7



When you join Lilly,
the future of her health
may well be
in your hands.

For over 100 years, Eli Lilly and Company has been manufacturing pharmaceuticals to ensure brighter futures for everyone. Today, that commitment continues worldwide with the discovery, development, manufacturing, and marketing of the highest quality pharmaceutical, medical instrument and animal health products. With current annual investments of more than \$600 million in research and development programs, our continued success requires the finest scientific talent available.

SENIOR DEVELOPMENTAL BIOLOGIST
Lilly Research Laboratories

This individual will develop an innovative research program in the area of meat animal or poultry developmental biology, and be part of an interdisciplinary team studying the regulation of myogenesis, neuroendocrine regulation of development and sex determination. We require a Ph.D. in physiology or a related field with formal training and experience in embryology and developmental biology. Experience in histology and anatomy, as well as an understanding of cell lineages is essential. Experience in contemporary molecular biology techniques such as *in situ* hybridization, electrophoresis and trans-blotting, mRNA isolation, cDNA preparation and differential cloning would be desirable, as is postdoctoral experience.

In addition to attractive salaries and benefits, Lilly provides excellent opportunities for continued growth through in-house seminars and off-site programs. Qualified applicants should submit a letter of application along with their CV, official transcripts, and names of three references to:

Christina C. Bodurow, Ph.D.
Ph.D. Recruitment
Corporate Recruitment
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285
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Commitment to Excellence

MEDICAL OFFICER (RESEARCH)

Postdoctoral position available in the National Institutes of Health, National Institute of Allergy and Infectious Diseases, Division of Intramural Research, Office of the Scientific Director, Laboratory of Molecular Allergy and Immunology Section, Public Health Service, Rockville, Maryland. This institute is seeking an MD trained in membrane biochemistry and molecular genetics with an interest in investigating the early events in IgE-mediated degranulation of mast cells at the molecular level. Applicants should have at least six years of postdoctoral training/experience. He/she will be considered for a permanent career or career conditional appointment at the GM-15 level (\$62,698 - \$80,113 per annum).

To Apply: Send curriculum vitae, a completed Application for Federal Employment (SF-171), a short statement of research interests, and three letters of recommendations to:

John I. Gallin, M.D., Director
Division of Intramural Research
NIH/NIAID
Bldg. 10, Room 11C103
9000 Rockville Pike
Bethesda, Maryland 20892



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NIH is an Equal Opportunity Employer

CELL AND DEVELOPMENTAL BIOLOGISTS

The College of Medicine and the Department of Cell and Structural Biology at the University of Illinois, Urbana-Champaign invite applications for a position at the **ASSISTANT PROFESSOR** level. This tenure track position will be available August 21, 1991. Applicants should hold the Ph.D. or M.D. degree or equivalent and show exceptional promise in research in the areas of cell or developmental biology. Responsibilities will include participation in teaching of Human Anatomy to medical students and graduate students. Salary will be commensurate with experience.

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

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

Applicants are requested to send a curriculum vita, a summary of research interests, and three letters of reference to:

JoAnn Cameron, Search Committee Chairman
College of Medicine at Urbana-Champaign
University of Illinois
190 Medical Sciences Building
506 South Mathews Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1254

In order to ensure full consideration, applications should be received by January 4, 1991. Interviews may be conducted before January 4, 1991, but all applications received by that date will receive full consideration and the final selection will not be made until after that date.

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

Formulation Staff Scientist Process Development

Immunex Research & Development Corporation, a Seattle-based biopharmaceutical company committed to research and development of immunological therapeutic products, is currently recruiting for a Formulation Staff Scientist.

The successful candidate will conduct research on formulation technologies for recombinant proteins and will have experience in sustained release mechanisms, protein spray-drying/lyophilization, liquid and gel formulations. The candidate will design stability studies to test the functional and chemical integrity of the protein and assist biologists and clinicians in assessing the efficiency of drug delivery. A Ph.D. in Biochemistry, Chemistry or Pharmacology is required. Experience within the pharmaceutical industry highly desirable.

Immunex Research and Development Corporation offers excellent opportunities for career development as well as competitive salaries and an excellent benefits package. For consideration, please submit C.V., names of three references, and a list of publications to: **Immunex Research and Development Corporation, Human Resources Manager, 51 University Street, Seattle, WA 98101.** Equal Opportunity Employer.

IMMUNEX

MOLECULAR BIOLOGY SCIENTIST

Baxter Hyland Division has an immediate entry level opening in its Research and Development Laboratory's new Molecular Biology department. The position requires a doctoral degree (with or without post doctoral training). We are seeking a talented and energetic individual to work as an integral member of multi-disciplinary project teams. Responsibilities will include the establishment of new technologies for product support and development. Research will focus on the development of proteins for human therapeutic use.

Demonstrated skill in the cloning or engineering of proteins will be essential. Experience with immunoglobulin genes, chimeric proteins or stable mammalian expression systems will be the hallmark of the superior candidate. Recent emphasis on the use of cell culture derived products at Hyland provides an opportunity for professional growth to the successful candidate.

Opportunities also exist for BS/MS scientists with broad expertise and 3-5 years of laboratory experience in Molecular Biology.

Baxter is a leader in the healthcare field, offering competitive salary and benefits and a smoke free work environment. For consideration, please send your resume along with a cover letter summarizing your qualifications and salary history in confidence to: **Baxter Hyland Division, Human Resources, Dept. MS-02, 4501 W. Colorado Blvd., Los Angeles, CA 90039.** An Equal Opportunity Employer.

Hyland Division
Baxter

Scientist/Senior Scientist



Discover Our Commitment To Quality.

Ortho Diagnostic Systems Inc., a Johnson & Johnson Company, is a world leader in the development and manufacture of medical diagnostics, reagents, immunological and related products. Our continuing commitment to quality has created an opportunity for a highly motivated and innovative Scientist in our team-oriented manufacturing support environment.

We'll look to you to develop and utilize analytical methods for monitoring and determining the characterization of reagents and intermediates in ELISA systems. You will then translate these methods into procedures and specifications for in-process testing. This position involves 70-80% benchwork, providing technical support for existing products in manufacturing, and working with a team of diverse professionals to improve efficiency, reduce costs and transition new products and processes into the manufacturing environment.

An MS/PhD in immunochemistry/protein chemistry with a strong emphasis on bioanalytical methods of characterization is required, plus 3-5 years' experience applying these methods in the diagnostic or pharmaceutical industry. Experience with antibody purification and conjugation procedures, and knowledge of immunology and biology of HIV and Hepatitis, are desirable. Familiarity with GMPs and specific experience with ELISA applications are pluses. Strong written/oral communication skills are essential.

Conveniently located within an hour's drive of New York and Philadelphia, we offer a professional, state-of-the-art work environment and a competitive salary. The comprehensive Johnson & Johnson benefits include dental plan, tuition reimbursement and our on-site total health facility, the LIVE FOR LIFE Wellness Center. Please send your resume and salary history to: Human Resources Dept. CHJH,



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Box B, Raritan, NJ 08869

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Discovering the future. Delivering its promise.

Research Manager, Cell Biology

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in molecular aspects of cell biology. The sponsored research is conducted principally at universities and private laboratories, with research performed by leading scientists in the field. This is a Civil Service position at the GM-13, 14 or 15 level (\$42,601 - \$76,982), depending on qualifications.

The individual selected will establish goals for and conceive, organize and direct research and development programs in new areas of cell biology addressing the molecular mechanisms of cellular responses to injury and other adverse stimuli, as well as regulatory processes driving regenerative events in cells and tissues. Specifically, the individual selected will integrate research on regulatory cellular processes such as activation events mediated by calcium ions, GTP-binding proteins, membrane lipid and protein phosphorylation, other post-translational modifications of proteins, and growth factors. The molecular events regulating cell function will be examined in the context of pathological changes in trauma, promotion of tissue regeneration, etc. This position provides the challenge and opportunity to have a creative and significant impact on the direction and quality of research conducted at the national level. Additionally, the opportunity exists to establish or maintain an individual research program at an academic institution or government laboratory.

Applicants must have a Ph.D. or equivalent training in biological sciences, with emphasis on cell biology, and at least one year of professional experience or an equivalent combination of education and experience. To be qualifying, this experience must have been at a level of difficulty and responsibility equivalent to that of the next lower grade level in Federal Service. Demonstrated research experience is preferred.

Interested persons should send a resume, list of publications and a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to: **Office of the Chief of Naval Research, Civilian Personnel Division, OCNR Code 01242P, Attn: Announcement #90-41(S), 800 North Quincey Street, Arlington, VA 22217-5000.**

Applications will be accepted through 16 January 1991 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (703) 696-4705.

U.S. Citizenship Required

An Equal Opportunity Employer

POSITIONS OPEN

FACULTY POSITION IN RADIATION BIOLOGY AT STANFORD UNIVERSITY

The Division of Radiation Biology of the Department of Radiation Oncology is seeking an **ASSOCIATE PROFESSOR** (tenure line) to complement existing programs in hypoxic cytotoxins and radiation sensitizers, hyperthermia, tumor biology, and DNA repair and mutagenesis. The division is looking for an individual who is applying basic molecular approaches to hyperthermia, particularly as this field relates to cancer treatment or predictive assays. *Stanford University is committed to increasing representation of women and members of minority groups on the faculty and particularly encourages applications from such candidates.* Applicants should submit curriculum vitae and names of three references to: **Dr. J. Martin Brown, Director, Division of Radiation Biology, Department of Radiation Oncology, Stanford University School of Medicine, Stanford, CA 94305-5468.**

FACULTY APPOINTMENTS IN MOLECULAR CELL BIOLOGY

The Department of Cell Biology, University of New Mexico, is seeking two independent investigators working on problems related to basic cancer research; for example, cellular differentiation, growth control, or viral or chemical oncogenesis. Candidates for these tenure-track appointments are expected to show evidence of originality and the ability to establish an effective and competitive research program that is commensurate with either assistant or associate level appointments. Candidates should send curriculum vitae, a brief description of research plans, and the names of three references to: **Nicholas A. Matwiyoff, Ph.D., Chair, Department of Cell Biology, University of New Mexico School of Medicine, Albuquerque, NM 87131.** Closing date for receipt of applications is 4 February 1991. *The University of New Mexico is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST/ PSYCHOPHARMACOLOGIST

Mayo Clinic/Mayo Medical School invites applicants for a **FACULTY POSITION** in the Department of Psychiatry and Psychology, in close collaboration with members in the Department of Pharmacology and/or the Department of Biochemistry and Molecular Biology. Candidates should have primary interests in major psychiatric disorders and be pursuing these interests with the methods of molecular genetics and/or molecular pharmacology. M.D. and clinical training in psychiatry are desirable but not required. Mayo will provide generous space and start-up funds in addition to an attractive package of salary and benefits. Academic rank will be determined by qualifications; established investigators are also encouraged to apply. Submit curriculum vitae with names and addresses of three or more references to: **Toshihiko Maruta, M.D., Chairperson of Search Committee, Department of Psychiatry and Psychology, Mayo Medical School, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN BIOMEDICAL SCIENCES

Creighton University School of Medicine, Omaha, Nebraska. Applications are invited for tenure-track positions in a new and developing Department of Biomedical Sciences. Research includes the chemistry and biology of regulatory peptides and their receptors in the control of cardiovascular, pulmonary, gastrointestinal and renal functions, of bone growth and of cancer, and comparative and developmental neuroscience. State-of-the-art equipment is available for this research. Productive research links exist with the clinical departments.

Applicants should have a strong background in molecular biology and/or molecular modeling and dynamics and welcome opportunities to collaborate with other faculty. Appointees will be expected to participate in courses to graduate and medical students in one or more of the following: biochemistry, molecular biology, cell biology, physiology, anatomy, and neuroscience.

Application, curriculum vitae, and addresses of referees should be sent to: **Dr. Richard F. Murphy, Chairman, Department of Biomedical Sciences, School of Medicine, Creighton University, 2500 California Street, Omaha, NE 68178.**

Creighton University is an Equal Opportunity/Affirmative Action Employer and minority candidates are encouraged to apply.

POSITIONS OPEN

FACULTY POSITIONS. Section of Genetics, Duke University Medical Center. A newly created Section of Genetics at the Duke University Medical Center invites applications for several tenure-track, junior level faculty positions. Although individuals utilizing molecular genetic approaches to questions in most any important area of biology will be considered, we are particularly interested in those applying genetic approaches to the study of development. Applicants should forward curriculum vitae, a statement of research plans, and the names of three references to: **Dr. Joseph R. Nevins, Head, Section of Genetics, Duke University Medical Center, P.O. Box 3054, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY MEMBER IN ANATOMY

The Department of Health, Administration, and Gerontology at The Wichita State University invites applications for a 9- or 12-month faculty position in health administration beginning in the fall of 1991. Responsibilities include research, service, and instruction in anatomy. **ASSISTANT/ASSOCIATE PROFESSOR** rank and tenure-eligible appointment requires an earned doctoral degree in anatomy, neuroscience, or a closely related field; associate professor appointment additionally requires significant teaching and research background. Deadline for receipt of application is 1 December 1990, or the first day of each month thereafter until the position is filled. Send a letter of application, résumé, and names and addresses of three professional references to:

**Dr. Kenneth Pitetti, Search Committee Chair
The Wichita State University
Department of Health, Administration,
and Gerontology
1845 North Fairmount
Wichita, KS 67208**

Affirmative Action/Equal Opportunity Employer.

TWO FACULTY POSITIONS IN MARINE BIOLOGY

Stanford University seeks two **MARINE BIOLOGISTS** for tenure-track faculty positions in the Department of Biological Sciences, to be housed at the Hopkins Marine Station in Pacific Grove, California. One position will be filled in the general area of cell and molecular biology and the other in organismal biology or ecological and evolutionary biology. Other fields will, however, be considered. The major criteria for selection include: excellence in research, breadth of interest, a multidisciplinary approach to fundamental problems, interest in utilizing the natural resources of the Monterey Bay, ability to interact with the existing faculty, and a commitment to undergraduate and graduate education.

Faculty track (assistant, associate, or full professor) will be commensurate with the academic qualifications of the candidate. Curriculum vitae, a summary of research interests, and the names and addresses of at least three references should be submitted by 15 December 1990 to: **Dr. Dennis A. Powers, Director, The Hopkins Marine Station, Department of Biological Sciences, Stanford University, Pacific Grove, CA 93950.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IMMUNOLOGY/MOLECULAR BIOLOGY ALBANY COLLEGE OF PHARMACY

Applications for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level are invited from candidates with a background in immunology, virology, microbiology, or molecular biology. Instruction responsibilities in immunology and related subject areas in the B.S. and Pharm.D. curricula. The successful candidate should have a Ph.D. and postdoctoral experience or its equivalent. A strong commitment to undergraduate education is imperative, along with supervision of undergraduate research.

Send letter of application along with curriculum vitae, the names and addresses of three references, and a statement of research interests and goals (by 1 January 1991) to:

**Professor William R. Stoll, Chair
Department of Biological Sciences
Albany College of Pharmacy
106 New Scotland Avenue
Albany, NY 12208-3492**

Albany College of Pharmacy is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION AT THE UNIVERSITY OF CALIFORNIA LOS ANGELES (UCLA) UCLA SCHOOL OF MEDICINE

Applications are requested for a faculty position in the Department of Medicine at the level of **ASSISTANT PROFESSOR.**

Applicants must have the Ph.D. degree in biochemistry and at least 2 years of research experience in the molecular biology of the blood-brain barrier and of the brain capillary endothelium, and publications in peer-reviewed journals. Duties will involve research and teaching at the assistant professor level. Salary will be \$52,140. Send curriculum vitae to: **Professor William M. Pardridge, Department of Medicine, UCLA School of Medicine, Los Angeles, CA 90024-1682.** *UCLA is an Affirmative Action/Equal Opportunity Employer.*

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS

The Department intends to hire several new **FACULTY MEMBERS.** Both tenured and tenure-track positions are available to outstanding candidates.

Applications are invited from candidates with the Ph.D. degree or its equivalent and appropriate postdoctoral experience for positions in biochemistry and molecular biophysics. In the area of biochemistry we are seeking persons with research interests in several disciplines including developmental biology, neurobiology, and regulation of gene expression. We are particularly interested in persons whose research in these areas focuses on nucleic acid-protein interactions. In molecular biophysics, the areas of particular interest are three-dimensional structural analysis, protein folding, and RNA conformation. We are also interested in persons studying enzyme mechanisms and protein-protein interactions.

Preference will be given to those people with strong records of research accomplishments. Interested candidates should submit curriculum vitae, bibliography, reprints, summary of current and future research goals as well as names of three references. *The department is especially interested in women and minority candidates.* All applications should be addressed to: **Chairman, Department of Biochemistry and Molecular Biophysics, Columbia University, Health Sciences, 630 West 168th Street, New York, NY 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION. The Department of Geology, Stanford University, invites applications for a tenure-track faculty position at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** level in isotope geology. We seek outstanding candidates with proven research records in the applications of ion microprobe analyses to significant earth science problems to join our new initiative to establish a national Center for Ion Probe Analysis (CIPA). CIPA will be located in the new Green Earth Sciences Building at Stanford and will be operated jointly with the Isotope Geology Branch of the U.S. Geological Survey located in Menlo Park. Other organizations, including several of the University of California campuses, Lawrence Livermore National Laboratory, and Charles Evans & Associates, will be participating members of CIPA. We anticipate that this new faculty position will be filled by January 1991, following successful completion of our fund-raising efforts for a third-generation, high-resolution, high-transmission ion microprobe and associated facilities. The successful applicant would become a member of a planned scientific/technical staff of six who would oversee the day-to-day operations of CIPA. He or she would also be expected to develop a world-class program of research, teaching, and graduate training in isotope geology.

Qualified applicants should send up-to-date curriculum vitae, a statement of teaching and research interests and experience, and the names of at least three persons familiar with the candidate's research accomplishments and professional background to: **Professor Gordon E. Brown, Jr., Department of Geology, Stanford University, Stanford, CA 94305-2115.** The closing date for applications is 15 June 1991.

Stanford University is an Equal Opportunity/Affirmative Action Employer.

National Cancer Institute Program in Embryonal Stem Cell Research

The Division of Cancer Biology, Diagnosis, and Centers, of the National Cancer Institute, National Institutes of Health is establishing a new intramural research program employing embryonal stem cell technology. Full funding, including equipment, operating expenses and salaries will be provided. We are currently seeking an individual with appropriate experience to head this program. This tenure-track position will require establishment of an independent research program as well as collaborative interactions with other NCI investigators. Salary will depend on experience.

Interested individuals should send a letter of application, curriculum vitae, and a brief statement of research interests to:

Dr. Stuart Rudikoff
Laboratory of Genetics
National Cancer Institute
Building 37, Room 2B-15
9000 Rockville Pike
Bethesda, MD 20892
(301) 496-1572

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Research Scientist/Ph.D. Chemistry/Biochemistry

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X-Ray Crystallographer

As a member of a multidisciplinary group, you will be responsible for structure elucidation of novel pharmaceutical compounds from drug discovery. Candidate will collaborate with spectroscopists and medicinal chemists and apply single crystal X-ray diffraction to the elucidation of compound structures. Requirements include a Ph.D. in Chemistry/Biochemistry with 1-5 years research experience in single crystal X-ray diffraction.

Separation Scientist/Protein Chemist

Join an investigative analytical research group responsible for providing innovative analytical instrumentation and methodology. Position involves collaborative studies with chemists, biologists, and analytical spectroscopists for the characterization and structure elucidation of proteins, peptides, isolated natural products, and novel pharmaceuticals. Requirements include a Ph.D. in Chemistry/Biochemistry with 1-5 years research experience in electrophoresis and HPLC.

Bristol-Myers Squibb careers offer the advantages of sustained growth, highly competitive salaries, extensive benefits and professional support in pursuing excellence. Please send resume with salary history to: **Bristol-Myers Squibb Pharmaceutical Research Institute, Dept. TZ, P.O. Box 5101, Wallingford, CT 06492-7661.** Equal Opportunity Employer, M/F/H/V.



Bristol-Myers Squibb Company

POSTDOCTORAL SCIENTIST

DRUG METABOLISM

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, is seeking a postdoctoral scientist to perform basic research in the area of enantioselective metabolism of therapeutic candidates. The scientist will use *in vitro* and *in vivo* techniques to gain an understanding of enantioselective metabolic pathways of specific therapeutic agents and the significance of enantioselective metabolism in the pharmacokinetics of the molecule. This position offers the opportunity to interact with senior members of the department to facilitate professional growth. The scientist will report research results within the company and at national scientific meetings and is encouraged to publish these results in leading scientific journals.

The successful candidate is required to have a Ph.D. degree in biochemistry, pharmacology, analytical chemistry or related area. A working knowledge of bioanalytical techniques such as GC or HPLC and a demonstrated ability to apply multi-disciplinary techniques to hypothesis testing are also required. Practical experience in techniques used to study metabolism *in vitro* or *in vivo* is preferred.

Located in a state-of-the-art facility in suburban Philadelphia near Valley Forge, PA, we offer a challenging, stimulating environment in which to grow and excel. For confidential consideration, please forward your resume to: Helene McConnell, E166, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



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Pharmaceuticals

OREGON

ACADEMIC HEMATOLOGY/ONCOLOGY

The Division of Hematology and Medical Oncology at Oregon Health Sciences University and VA Medical Center seeks applicants for Assistant or Associate Professor of Medicine. Board certification or eligibility in both Hematology and Medical Oncology is preferred. Interest in teaching and clinical care of patients with hematologic disorders and cancer are of substantial importance. Applicants must have demonstrated expertise or training in basic hematology or oncology research. They will be provided with resources designed to support an independent research program. Send inquiries to:

Grover C. Bagby, Jr., M.D.
Head, Division of Hematology & Medical Oncology-L580
Oregon Health Sciences University
3181 SW Sam Jackson Park Road
Portland, OR 97201

OHSU and the Department of Veterans Affairs are affirmative action employers. Women and minorities are encouraged to apply.

ABBOTT LABORATORIES

Abbott Laboratories' Pharmaceutical Products Division is a leader in the development and manufacture of anti-infective, cardiovascular and anti-convulsant/neurological products. With over \$500 million committed to R&D, we perform renowned clinical studies, and maintain a variety of specialized labs featuring state-of-the-art developmental technologies. Today, we offer a highly motivated individual a superior environment and the opportunity to make a significant personal and professional commitment in the following position.

COMPUTER PROGRAMMER/ NMR SPECTROSCOPIST

As part of a team whose goal is to assist in designing new pharmaceutical agents by determining the three-dimensional structures of proteins and enzyme/inhibitor complexes by NMR, this position is responsible for aiding the development of computer programs for the automated analysis of multi-dimensional NMR data. A Ph.D. degree or equivalent experience along with knowledge of the requisite NMR methodology and/or experience in protein molecular modeling is required. Demonstrated skill in producing well-engineered software is a must.

At Abbott, we encourage a high level of technical achievement and creative thinking. We provide competitive compensation and benefits including a profit sharing and a stock retirement plan. We are located in an attractive suburban area approximately 30 miles north of Chicago. For consideration, please send your resume with salary history to: **Scott Swayne, Corporate Placement, Job #37817, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



Senior Research/Staff Scientist

Marine Science Laboratory

Battelle, Pacific Northwest Laboratories (PNL), is the preeminent multi-program national laboratory for rapid advancement of science and development of technology. Our staff of 3300 handle 1,000+ research projects each year. Continued growth prompts us to seek a Senior Research Staff Scientist for our Marine Sciences Laboratory (MSL), located on the Olympic Peninsula in Sequim, Washington, two hours from Seattle.

Global change research is a core program at PNL. At the Marine Sciences Laboratory, our focus is on ocean/atmosphere interactions, ocean circulation and mixing processes, and the carbon cycle. The successful candidate will work with a team of chemical, biological, and physical oceanographers, and participate in research on the ocean carbon cycle, large-scale biological processes, and global change.

We seek an Oceanographer with a PhD and a record of at least three years' post-doctoral research. National recognition for work on large-scale chemical and/or biological processes, involvement with observational and modeling efforts, or experience with research planning is highly desirable. Specific areas of expertise can include: primary production in the ocean, carbonate chemistry, and the integration of ocean chemistry, biology and ocean dynamics in complex models. Strong scientific and personal communication skills are essential. In the first three years of employment, the candidate can expect frequent travel in the U.S. and abroad, and may be assigned temporarily to Battelle's Washington D.C. Office.

To pursue this career opportunity, send/FAX vitae, college transcripts, and the names of three references to: **Battelle, Pacific Northwest Laboratories, Dept. RZ30, P.O. Box 1406, Richland, WA 99352. FAX (509) 376-9099.** Equal Opportunity Employer. U.S. Citizenship required.



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Amgen, an innovative leader in the discovery and development of human therapeutic products through applications of biotechnology, has an immediate opportunity for a Ph.D. level scientist in our Analytical Chemistry Group. Responsibilities for this position will include the development of methodologies for the analysis of recombinant DNA derived proteins and peptides.

Qualified candidates must have a Ph.D. in Biochemistry or a related discipline and experience with methods for the analysis of proteins, specifically HPLC and related methods.

Amgen offers a stimulating and challenging research environment on the leading edge of biotechnology as well as an excellent compensation and benefits package, including equity offerings. We are located in an attractive community northwest of Los Angeles and free of the concerns normally associated with the LA area. Candidates should address their CV to:

AMGEN, INC.
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Amgen Center
Thousand Oaks
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UNIVERSITY OF COLORADO SCHOOL OF MEDICINE DEPARTMENT OF PHYSIOLOGY

ASSISTANT PROFESSOR-TENURE TRACK

The Department of Physiology at the University of Colorado School of Medicine is undergoing a major expansion. Space and resources are available for one additional tenure track position at the Assistant Professor level. Although applications may be submitted at any time, selection of candidates will begin on or about 1 January, 1991.

The present Department has strong research interests in cellular, molecular, and developmental neurobiology, secretory processes, and reproduction. Applicants will be considered in these or other areas of neurobiology or cellular and molecular physiology.

The School of Medicine is strongly research-based, with active interdisciplinary programs in neurobiology, molecular biology, cell biology, endocrinology, and immunology.

Successful candidates will be expected to conduct a vigorous independent research program and to participate in graduate and professional teaching. Applicants should send a *Curriculum Vitae* and the names of at least three referees to:

Dr. S.R. Levinson
Chair, Faculty Search Committee
Department of Physiology, C240
University of Colorado Medical School
Denver, CO 80262

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BIOGEN

MISSION

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The business of biotechnology will see worldwide sales grow from \$1.2 billion in 1989 to a projected \$6 billion in 1993, and Biogen is a pace setter in that industry. One of only three biopharmaceutical companies to show a profit in 1989, we are beginning our next growth stage as we become a fully integrated pharmaceutical company. Our creative and innovative research will begin to share the spotlight with manufacturing and marketing as we bring more products directly to market. Products are targeted for use in the AIDS therapeutics, cardiovascular, anti-inflammation, and selected cancer markets. For the dedicated scientific or technical professional we offer an environment that is charged with the excitement of growth, laced with entrepreneurial spirit and filled with the satisfaction of responding to worldwide health and human therapeutic needs. Help us set the pace in one of these outstanding positions.

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You will be working with our Scientists on key projects essential to the continued success of the company. Continued growth and expansion has created positions in the areas listed below.

Cell Biology/Molecular Biology

We are looking for an individual to work on projects involving the control of inflammation. These projects require a blend of skills and experience in aspects of cloning, PCR technology, gene expression, and protein chemistry; some cellular immunology is desired. A BS/MS with 2-6 years' strong training in Molecular Biology and/or Protein Chemistry, along with a good background in immunology, is required.

Chemistry

We are looking for an individual with a BS in Chemistry with 1-2 years' experience in the practical aspects of organic synthesis, or an MS in Chemistry. You will be working in the areas of peptide synthesis, purification and analysis as well as general organic synthesis. Practical skills in peptide synthesis will be a plus. This position is at the technical level and will require good organizational skills.

Analytical Protein Chemistry

You will be responsible for the daily operation of gas phase microsequencers and on-line HPLCs including troubleshooting, preventative maintenance, and performance optimization. You need to possess good mechanical/organizational skills and be able to process data in a timely, objective and responsible manner. Familiarity with techniques for protein sequence analysis, amino acid analysis, modification and fragmentation of proteins is preferred.

Protein Chemistry

We currently have an opening in our Protein Chemistry department for an individual to prepare, document and release high purity protein products for reagent use. You must have a Bachelor's degree in Life Science and 4-6 years' experience in lab-scale production and purification of recombinant proteins. Familiarity with bioassay techniques preferred; Molecular Biology experience is a plus.

Our compensation and benefits package is one of the best in the industry, and is designed to attract and retain the finest talent available. Our Relocation Assistance is only one example of the benefits you can look forward to at Biogen.

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ANNOUNCES**

**POSTDOCTORAL & SENIOR
RESEARCH ASSOCIATESHIP AWARDS**

The awards sponsored by the National Research Council are available at the U.S. Army Institute of Dental Research. The research opportunities include physiology and biochemistry of bone regeneration (which also includes studies of growth factors using bone cell cultures), purification and characterization of bone-inductive proteins and monoclonal antibodies, engineering of predictably degrading bone-regenerating systems, biodegradable polymer chemistry and microencapsulation and time-release drug delivery systems. Doctoral degree in life sciences or biomedical sciences is required. Annual stipend for recent graduates is \$27,750 and is appropriately higher for those with more than 5 years of experience. Relocation reimbursement and funds for professional travel are available, and a health insurance program is offered. Awards are for 1 year with possible renewals to a total of 3.

For further information contact:
Dr. Jeffrey Hollinger at (202) 576-3764 or
Dr. Anshumali Chaudhari at (202) 576-3462.

Their mailing address is:
U.S. Army Institute of Dental Research
Walter Reed Army Medical Center
Washington, D.C. 20307-5300

For application materials, write to:
Associateship Programs (GR 430/SDR),



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Washington D.C. 20418
FAX: (202) 334-2759

Application Deadlines
are January 15 and August 15, 1991.

**National Heart, Lung, and Blood
Institute (NHLBI)**

National Institutes of Health

**POSTDOCTORAL AND TENURE
TRACK POSITIONS** are available in
the Laboratory of Molecular Cardiology
to study the function, regulation and
expression of contractile proteins in
muscle and nonmuscle cells. This
laboratory is composed of two groups,
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of Dr. James R. Sellers.

We presently have vacancies available
for two positions:

Postdoctoral Fellow - we are seeking
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with actin.

Senior Postdoctoral Fellow - we are
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years of postdoctoral experience in the
techniques of molecular genetics who is
interested in applying these techniques
to the study of the contractile proteins or
related proteins.

Interested candidates should forward a
current C.V. and bibliography along with
names and addresses of three
references to either **Dr. Sellers or Dr.
Adelstein at: Laboratory of
Molecular Cardiology, National
Institutes of Health, Building 10,
Room 8N-202, 9000 Rockville Pike,
Bethesda, MD 20892, Telephone (301)
496-1865, Fax (301) 402-1542.**

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POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately to examine the functional role of the secretory immune system of the eye. Research will focus upon developing an effective strategy for ocular immunization to both viral and noninvasive antigens. Send curriculum vitae and the names of three references to: **Dr. David A. Sullivan, Immunology Unit, Eye Research Institute, 20 Staniford Street, Boston, MA 02114. Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

POSTDOCTORAL POSITION. Immediate opening to study mechanisms of cardiac fibrillation and defibrillation. Projects involve cellular electrophysiology and fluorescent imaging of intracellular calcium, computer modeling, and isolated heart, whole animal, and human studies. A Ph.D. or M.D. with experience in cardiac electrophysiology is preferred. Please contact: **Dr. Janice Jones, Department of Physiology and Biophysics, Georgetown University, VA Medical Center, 50 Irving Street, N.W., Washington, DC 20422. Telephone: 202-745-8610.**

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RESEARCH AT MAYO CLINIC**

Postdoctoral position available in the Division of Developmental Oncology Research at Mayo Clinic/Foundation to study modulation of transmembrane signaling in human cancer. Superb state-of-the-art laboratory and institutional core facilities available to a Ph.D. or M.D./Ph.D. in molecular pharmacology and/or molecular biology. Send applications with curriculum vitae, bibliography, and names, addresses and telephone numbers of three references to: **John S. Kovach, M.D., Professor and Chairman, Department of Oncology, Director, Mayo Comprehensive Cancer Center, Mayo Clinic, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION IN CELLULAR
IMMUNOLOGY/RETINOIDS**

A postdoctoral position will be available for a recent Ph.D. or M.D. to study the immune response to bacterial antigens, the effects of cytokines on antibody production, and the role of retinoids as regulators of the antibody response. Studies will include development of memory, and effects of lipopolysaccharides, cytokines, and cell surface molecules on signaling. Experience with lymphocyte separation, FACS analysis, ELISA, and/or molecular techniques is desirable. Please send curriculum vitae, a letter describing training, and names of three references to: **Dr. A. Catharine Ross, Department of Physiology and Biochemistry, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, PA 19129.**

**CELLULAR AND MOLECULAR
ENDOCRINOLOGY
POSTDOCTORAL POSITION**

To study control of hormone secretion at the single cell level by use of reverse hemolytic plaque assays in combination with recombinant DNA technologies and other contemporary biochemical and microscopic techniques. Ongoing projects include: (i) ontogeny and functional interconversion of growth hormone and prolactin secreting cells in rats and cattle, (ii) the involvement of milk-borne factors in the differentiation of pituitary cell types, and (iii) endocrine-immune interactions, particularly as they relate to prolactin and growth hormone. Salary is highly competitive and commensurate with experience. Background in cellular or molecular biology is desirable, but not an absolute requirement. Please send curriculum vitae and names of three references to:

**Dr. L. Stephen Frawley
Division of Cellular and Molecular Endocrinology
Department of Anatomy and Cell Biology
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425-2204
Telephone: 803-792-3526**

**GRADUATE TRAINING IN BIOCHEMISTRY
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POSITIONS OPEN

POSTDOCTORAL POSITION

Available for investigations of molecular mechanisms of neurodegenerative diseases. Candidate should have demonstrated expertise in cellular/molecular biology. Our laboratory is committed to studies of molecular biological approaches to understanding the pathogenesis of human neurodegenerative diseases and their animal models. Send curriculum vitae and three letters of recommendation to: **Donald L. Price, M.D., Neuropathology Laboratory, The Johns Hopkins University School of Medicine, 509 Pathology Building, 600 North Wolfe Street, Baltimore, MD 21205-2182. Affirmative Action/Equal Opportunity Employer. Because of funding requirements, applicants limited to U.S. citizens/permanent residents.**

**POSTDOCTORATE
MOLECULAR BIOLOGY
CARDIAC SURGERY**

Immediate opening for two **POSTDOCTORAL POSITIONS**, one in molecular biology, one in cardiac surgery/physiology, to join an active team in cardiovascular research. Please send résumé to:

**Deborah Research Institute
Trenton Pine Mill Road
Browns Mills, NJ 08015-1799**

POSTDOCTORAL POSITION. In quantitative genetics/genetic epidemiology under the direction of Dr. Candace Kammerer. The successful candidate will collaborate in multidisciplinary research programs involving human subjects and pedigree colonies of 3200 baboons and 1200 marsupials. Research projects include evaluations of genetic analysis methods using computer-simulated data and investigations of genetics of atherosclerosis, hypertension, osteoporosis, and skin cancer. Salary ranges from \$21,694, with consideration for prior relative postdoctoral experience. Send curriculum vitae and the names, addresses, and telephone numbers of three references to: **Personnel Director (056), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147. An Equal Opportunity Employer, M/F.**

**HARVARD MEDICAL SCHOOL
DEPARTMENT OF MICROBIOLOGY
AND MOLECULAR GENETICS**

POSTDOCTORAL POSITION in bacterial genetics and physiology. A position is open for studying global and specific regulation of gene expression and protein modification involved in energy metabolism in *Escherichia coli*. Experience in different aspects of molecular genetics, such as physical mapping, strain and vector construction, gene fusion, DNA sequencing, site-directed mutagenesis, and mRNA analysis is desirable. Some familiarity with protein chemistry and enzymology is also highly useful. Starting salary range: \$22,000 to \$25,000 plus benefits, depending on qualifications and background. Send applications with curriculum vitae and naming three references to: **Professor E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 200 Longwood Avenue, Boston, MA 02115. Harvard University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS AVAILABLE

Opportunity to join multidisciplinary program at the University of Rochester Medical Center.

- Position (i): Study the regulation and structure-function relationship of anion transport proteins. Experience in molecular or cellular biology or electrophysiology is preferred.

- Position (ii): Study regulation of O-glycosylation. Experience in structural characterization of glycoconjugates with opportunity to learn molecular biology, if desired.

- Position (iii): Study receptors and/or proteins involved in signal transduction pathways regulating exocrine cell secretion. Experience in molecular biology preferred.

Submit curriculum vitae and the names and addresses of three references to: **Dr. Lawrence A. Tabak, University of Rochester, School of Medicine and Dentistry, Department of Dental Research, Box 611, Rochester, NY 14642. Telephone: 716-275-3441.**

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

POSITIONS OPEN

POSTDOCTORAL POSITION. In lipoprotein biochemistry and genetics under the direction of Dr. John VandeBerg. The successful candidate will collaborate in multidisciplinary research programs involving human subjects and a colony of 3200 pedigreed baboons. Salary ranges from \$21,694, with consideration for prior relative postdoctoral experience. Send curriculum vitae and the names, addresses, and telephone numbers of three references to: **Personnel Director (057), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147. An Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITION

A position is now available to study the structure/function relationship of signal transducing G proteins. The initial emphasis will be on G_i and the adenyl cyclase system using mammalian expression vectors and S49cyc⁻ cells. The position is part of a program project investigating the pharmacology and molecular biology of receptor/effector systems that draws on faculty/staff from the University of Pennsylvania School of Medicine and SmithKline Beecham Pharmaceuticals. Send curriculum vitae and names of two references to: **Dr. Jeffrey M. Stadel, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406.**

POSTDOCTORAL FELLOW

Postdoctoral position available with an active group studying the mechanisms of growth factor and oncogene intracellular signaling, and to develop novel agents with activity against signal transduction targets as potential anticancer drugs. Position offers excellent opportunities to collaborate and develop own research ideas working in modern, well-equipped facilities and a stimulating research environment. Stipend is based on qualifications and is highly competitive, with excellent benefits. Suitable for a Ph.D., M.D., or D.V.M. with a strong background in biochemistry, cell biology, pharmacology, etc. Send application, current curriculum vitae, and names and addresses/telephone numbers of three references to: **Dr. G. Powis, Department of Pharmacology, Mayo Clinic and Foundation, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Employer.**

GRADUATE STUDIES IN PHYSIOLOGY

UNIVERSITY OF ALBERTA CANADA

The Department of Physiology at the University of Alberta offers graduate programs leading to the degrees of M.Sc., Ph.D., and M.D.-Ph.D., as well as opportunities for postdoctoral training.

The University of Alberta is a major urban university located in Edmonton, a modern cosmopolitan city of 600,000 people. The environment offers varied cultural activities and easy access to the Canadian Rockies with some of the finest summer and winter recreational opportunities in the world.

Typical stipends are \$11,000 to \$14,000 for graduate and \$22,000 to \$35,000 for post-doctoral training. Some external awards include a research and travel allowance of \$1,000 per year for graduate and \$2,000 for postdoctoral training. Modern facilities are available for research in a number of areas and with a number of faculty.

A wide range of research interests is represented including: cellular and molecular endocrinology, cellular physiology, transport physiology, neurophysiology and biophysics.

Interested candidates are invited to apply to:

Graduate Program Director,
Department of Physiology,
University of Alberta,
Edmonton, Alberta,
T6G 2H7, Canada.

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

POSTDOCTORAL FELLOWSHIPS at the WOODS HOLE OCEANOGRAPHIC INSTITUTION

- Applied Ocean Physics & Engineering
- Biology • Chemistry • Geology & Geophysics
- Physical Oceanography

Applications are invited from new or recent doctorates in science or engineering with interests in physical oceanography, meteorology, marine chemistry, marine geology and geophysics, biological oceanography, or applied ocean physics and engineering. Recipients of awards are selected on a competitive basis, with primary emphasis placed on research promise.

• Marine Policy and Ocean Management

Research fellowships are offered to individuals in the social sciences, or natural sciences to apply their training to the economic, legal and political issues that arise from uses of the world's oceans. Emphasis is placed on the economics of ocean space and on the role of science in governmental and industrial ocean policy. Topics of special current interest include marine biological diversity, the quality of marine habitats and marine reserves, and the impacts of sea-level change, the industrial organization of advanced marine technologies, management of historic shipwrecks, and Arctic affairs. Other research interests also may be appropriate.

Fellowships are rewarded for one year with a stipend of \$32,500 plus group health insurance and a modest research budget. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by January 15, 1991 for 1991-92 awards. Awards will be announced in March. Write for application forms to:

Dean of Graduate Studies
P.O. Box 5

An equal opportunity/
affirmative
action employer

**WOODS HOLE
OCEANOGRAPHIC
INSTITUTION**

Woods Hole, MA 02543



UNIQUE CAREER CHANGE OPPORTUNITY

Ph.D.s & Doctoral Professionals

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

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

The Graduate Professional Education Program (GPEP) features:

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

For more information and an application contact:

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

Henry Ford Health System

Staff Investigator for bone marrow transplantation research. Works independently within policies and procedures. Assists in development, direction and executive research objectives. Prepares material for publications, manuscripts and grants. Ph.D. and four-year, post-doctoral research required. Expertise in cell culture, molecular biology, immunology, column chromatography and statistics helpful. Full-time days, flexible schedule.

Contact:

**Dr. Robert Chapman,
Division Head
Hematology/Oncology
Henry Ford Hospital
2799 W. Grand Blvd.
Detroit, MI 48202
FAX: (313) 876-2018**

An equal opportunity employer

POSITIONS OPEN

UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER POSTDOCTORAL TRAINEESHIPS

The section of Cardiovascular Disease at the University of Oklahoma Health Sciences Center is seeking postdoctoral candidates to work in an active cardiac electrophysiology research group encompassing the following areas: isolated myocytes with fluorescence microscopy and patch clamping, in vivo and in vitro physiological modeling of arrhythmias, and computer-based processing and modeling of electrical signals from each milieu. Candidates will work with an interdisciplinary team of physiologists, pharmacologists, biomedical engineers, and physicians. Candidates should have completed their doctoral requirements in one of these or related areas. Please send curriculum vitae and three references to: **Benjamin J. Scherlag, Ph.D., Department of Veterans Affairs Medical Center, 921 Northeast 13th Street, Oklahoma City, OK 73104. Telephone: 405-270-0501, Extension 3553; FAX: 405-270-5132.**

POSTDOCTORAL FELLOWSHIPS. The Science Studies Program at the University of California, San Diego (UCSD), invites applications for 1991-92. For information, write to Science Studies, 0102, UCSD, La Jolla, CA 92093-0102. FAX: 619-534-3388. Deadline: 1 March 1991. *Equal Opportunity/Affirmative Action Employer.*

METABOLISM/GENETICS FELLOWSHIPS.

Available in Center for Inherited Disorders of Energy Metabolism, Case Western Reserve University, a national program for investigation of defects of pyruvate metabolism, fatty acid oxidation, and electron transport. Opportunities leading to Board certification in pediatric endocrinology or medical genetics available, with training in interdisciplinary clinical and laboratory research (2- to 3-year program). *Must be U.S. citizen or resident with M.D. or Ph.D.* Contact: **Dr. Douglas Kerr, Pediatrics, 2074 Abington Road, Cleveland, OH 44106. Telephone: 216-844-1286.**

UNIVERSITY OF MINNESOTA NEUROSCIENCE POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship position available to work on chronic unitary cerebellar recording in behaving primates. Emphasis will be on the neural representation of kinematic and dynamic parameters during complex, visually guided arm movements. Studies will also include the Purkinje cells' role in adaptive motor behavior. Applicants should have a Ph.D. and/or M.D. with experience in systems neuroscience, preferably electrophysiological. Closing date for applications is 31 December 1990. Position available 1 February 1991. Applications to: **Dr. Timothy Ebner, University of Minnesota, Neurosurgery Department, Box 96 UMC, 420 Delaware Street, S.E., Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

AMERICAN MUSEUM OF NATURAL HISTORY FELLOWSHIPS AND GRANTS

Fellowships: Research/museum fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1991. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, mineral sciences, and the field of museum education as it relates to natural history museums or planetariums. Deadline for applications, including Chapman Fellowships (ornithology), is 15 January 1991.

Grants: Research grants are available to advanced predoctoral candidates and recent postdoctoral researchers in the fields of zoology and paleontology. Awards range from \$200 to \$1000. Deadline dates vary for each grant program:

- Frank M. Chapman (ornithology), 15 January 1991.
- Theodore Roosevelt (North American fauna), 15 February 1991.
- Lerner-Gray (marine zoology), 15 March 1991.

Request information booklet and application forms from: **The Office of Grants and Fellowships, Department H, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.**

POSITIONS OPEN

NATIONAL INSTITUTE ON AGING SENIOR STAFF FELLOWSHIP IN POSITRON EMISSION TOMOGRAPHY

National Institutes of Health, Public Health Service, senior staff fellowship is available beginning July 1991 for studying human brain function and metabolism in relation to aging and disease (e.g., Alzheimer's disease, geriatric, depression), using positron emission tomography (PET) to measure cerebral metabolism and blood flow. PET measures are combined with other imaging techniques (magnetic resonance), neuropsychological testing, and neuropharmacology. Responsibilities include writing and conducting clinical protocols and limited clinical care on an eight-bed clinical research unit. Positron, which is tenure track, is an excellent opportunity for neurologists, psychiatrists, or other clinicians interested in brain function and disease who are planning research careers. M.D. degree and medical license are required. Fellows work in Laboratory of Neurosciences (S. I. Rapoport, M.D., chief), National Institute on Aging, Bethesda, Maryland. Starting salary is commensurate with training and experience.

For further information, contact: **M. B. Schapiro, M.D., Chief, Brain Aging and Dementia Section, Laboratory of Neurosciences, National Institute on Aging, Building 10, Room 6C-414, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20892. Telephone: 301-496-4754. NIH is an Equal Opportunity Employer.**

C. H. BEST INSTITUTE POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship in diabetes research, molecular endocrinology, molecular biology, differentiation, reproductive biology, immunology, structure and function of membranes, or lipid metabolism. Tenable in the Banting and Best Department of Medical Research for 2 years after 1 July 1991 with a competitive stipend available to new Ph.D.'s or candidates with less than 2 years of postdoctoral training by 30 June 1991. Send curriculum vitae, transcripts, and three letters of reference, preferably before 15 December 1990 to: **Dr. Irvine B. Fritz, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada M5G 1L6.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately to study molecular mechanisms controlling genomic activation in erythrocytes. Experience with gene probes, RNA synthesis, and monoclonal antibodies preferred. Salary commensurate with experience. Have curriculum vitae and three letters of recommendation sent to: **Dr. Marie A. DiBerardino, Department of Physiology and Biochemistry, The Medical College of Pennsylvania, 3300 Henry Avenue Philadelphia, PA 19129. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral position is available to study differentiation of the human teratocarcinoma cell line Tera-2. Current research is focused on the clone, sequence, and regulation of DNA binding proteins which are altered during the differentiation. Applicant should have a strong background in molecular biology. Please send curriculum vitae and names of three references to:

**K. Itakura, Molecular Genetics Department
Beckman Research Institute of the City of Hope
1450 East Duarte Road
Duarte, CA 91010**

POSTDOCTORAL/RESEARCH ASSOCIATES

The Cell Biology Laboratory, investigating cellular and molecular mechanisms of growth and differentiation of human epithelial cells, is seeking research associates to study molecular mechanisms of epithelial cell immortalization and transformation in vitro. Applicants are expected to have previous experience in epithelial cell culture, gene amplification, transfection of cells with subgenomic DNA, and other molecular biology techniques. Please send curriculum vitae and names and addresses of three references to: **Dr. D. P. Chopra, Institute of Chemical Toxicology, Wayne State University, 2727 Second Avenue, Room 4000, Detroit, MI 48201.**

Wayne State is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE.

Available immediately to study the effects of toxicants on epithelial cell differentiation and gene expression. Ph.D. required; background in cellular and molecular biology desirable. Send curriculum vitae and three references to: **Dr. Ellen A. Rorke, Department of Environmental Health Sciences, Case Western Reserve University (CWRU), School of Medicine, 2109 Adelbert Road, Cleveland, OH 44106. CWRU is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE (B.S. or M.S.) with at least 3 years of laboratory experience in molecular biology including gene cloning and DNA sequencing. Will be part of a team involved in the identification of HTLV in human disease. Competitive salary and benefits. Send résumés to: **Mrs. Eva Davis, Search Committee, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104. FAX: 215-898-3868. Equal Opportunity Employer.**

RESEARCH ASSOCIATE. Available immediately for a talented scientist with experience in macromolecular x-ray structure determination. Projects include two members of the annexin family (calcium-dependent regulators of vesicle fusion), fibroblast growth factor and tumor necrosis factor/receptor interactions, and the GTP-regulated β -adrenergic transduction protein, Gs α . Excellent x-ray data collection, computing facilities and a highly interactive academic environment. *An Equal Opportunity Employer.* Send curriculum vitae and names of three references to: **Dr. Stephen Sprang, Howard Hughes Medical Institute, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050. Telephone: 214-689-5008. Bitnet: SPRANG@UTSW.**

RESEARCH POSITION IN ACADEMIC DEPARTMENT OF PATHOLOGY. The Department of Pathology at Stanford University School of Medicine seeks candidates for appointment at the level of **ASSISTANT OR ASSOCIATE PROFESSOR.** Individuals must have an established record of scholarly productivity with scientific articles in peer-reviewed journals and evidence that these articles reflect significant contributions of the candidates in the design and conduct of the studies. There also must be proof of scientific independence and the ability to obtain research funding. Of special interest are candidates with established credentials in the area of molecular biology including as it relates to clinical medicine. Preference will be given to individuals who can contribute to clinical service obligations, particularly in clinical pathology. Applicants should send their curriculum vitae and names of references to: **Klaus G. Bensch, M.D., Professor and Chairman, Department of Pathology, Stanford University Medical School, Stanford University Medical Center, Stanford, CA 94305. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.**

DEPARTMENT OF BIOLOGY TEMPLE UNIVERSITY

As part of a program of research expansion, the Department of Biology at Temple University anticipates three positions for highly qualified individuals.

• **A SENIOR SCIENTIST** with the possibility of appointment as departmental chair. We are interested in a person with research interests in biochemistry or molecular biology who would complement our strengths in developmental biology.

• **A PHYSIOLOGIST** with research interests either in cellular, developmental, organismal, or neural physiology.

• **A MOLECULAR BIOLOGIST or BIOCHEMIST** with research interests in developmental, cellular, or neuro- biology.

Candidates should have an active research program, a commitment to undergraduate and graduate education, and an ability to interact with biologists with diverse interests. The department is broadly based with major strengths, in addition to developmental biology, in cellular biology, neuroscience, physiology, molecular biology, and genetics. The department includes 24 faculty and has an established graduate program leading to the M.A. and Ph.D. Candidates should submit research plans, curriculum vitae, and the names of three references to: **Dr. Joel B. Sheffield, Chair, Department of Biology, Temple University, Philadelphia, PA 19122. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIPS at the University of Washington COLLEGE OF OCEAN AND FISHERY SCIENCES

Applications are requested from new or recent doctorates in science, engineering and from individuals with equivalent degree stature in related fields for fellowships to be awarded in the College.

The College consists of four units covering all aspects of marine science and marine policy. Fellowship holders will be appointed in one of the following departments:

The School of Oceanography carries out basic research in physical oceanography, marine chemistry, marine geology and geophysics, and biological oceanography

The Institute for Marine Studies focuses multidisciplinary research on marine policy issues arising from man's use of the oceans; relevant disciplinary training may be in any of the social or natural sciences or in law.

The Applied Physics Laboratory carries out research in physical oceanography, polar science, underwater acoustics, and a wide range of engineering disciplines

The School of Fisheries specializes in fish and shellfish systematics and ecology, aquaculture, quantitative fishery management, environmental toxicology and food science

Fellowships are awarded for one year, renewable for a second year, with a stipend of \$28,500 and a modest research budget. Health insurance is also provided. A complete application consists of transcripts of the applicant's graduate record, a vita, letters of recommendation from three referees, a synopsis of the doctoral dissertation, and a 1-2 page statement outlining the research the applicant proposes to undertake at UW. Direct contact with faculty in the College is encouraged. All materials must be received by 4 January 1991. Awards will be announced in Spring 1991 (early April). Fellowships are expected to be taken up before 1 September 1991.

Applications and any questions should be addressed to:

Search Committee, COFS Postdoctoral Program, Office of the Dean,
HN-15, College of Ocean and Fishery Sciences, University of Washington,
Seattle, WA 98195

Equal Opportunity/Affirmative Action Institution

RESEARCH ASSOCIATE East-West Center

The East-West Center is a non-profit educational institution established in Hawaii in 1960 by the United States Congress with a mandate "to promote better relations and understanding among the nations of Asia, the Pacific and the United States through cooperative study, training and research."

Applications are being accepted for a three-year limited position, with the possibility of extension, as a Research Associate in the Environment and Policy Institute (EAPI), the chief concern of which is the maintenance of environmental quality and the productivity of resources in light of regional population growth and economic development.

The Research Associate will conduct collaborative interdisciplinary, multinational research and other activities pertaining to renewable resources management, policy, use and other environmental issues. EAPI research emphasizes policies and practices for sustainable development and the interaction of biophysical systems and social/cultural systems, such as the effects of people on land and water or the impact of development projects on environment quality.

Responsibilities include: organizing research-related conferences and workshops, publication of research results; promoting interaction among scientists, government officials, representatives of donor and technical agencies, and managers of resource development programs; seeking sources of external financial support, advising Center degree student grantees; and maintaining liaison with research activities at centers in the Asia-Pacific region.

REQUIRED QUALIFICATIONS: Ph.D. or equivalent (Master's degree plus five years relevant post-degree professional experience) in a natural or social science concerned with natural resources policy, use and/or management and research experience with the interaction of natural and social systems. A record of substantial written documents, including thesis/dissertation, reports, and/or publications related to the above. Proficiency in the English language. Professional or research experience in developing countries with first-hand knowledge of at least one country in the Asia-Pacific region as shown by publications, reports, institutional affiliations, and/or other evidence. Demonstrated ability to work successfully in a multicultural environment.

PREFERRED QUALIFICATIONS: Experience in collaborative projects that involved individuals from the United States and different Asian and Pacific countries. Competence in major Asian or Pacific language.

SALARY: \$29,891.00-\$50,342.00 per year, depending on qualifications, plus a cost-of-living allowance currently at 22.5% (subject to change).

Submit resume with cover letter which includes the title of the position you are applying for, a narrative description detailing relevance of your qualifications and background to the responsibilities of the position, and names and addresses of three professional references. Applications must be postmarked by January 11, 1991. Send to: Karen Lam, Personnel Office, Dept 19, East-West Center, 1777 East-West Road, Honolulu, Hawaii, 96848.

An Equal Employment Opportunity/Affirmative Action Employer.

82nd ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH MAY 15-18, 1991, HOUSTON, TEXAS

TOPICS AND CHAIRPERSONS OF MAJOR SCIENTIFIC EVENTS

- "Discoveries and Opportunities in Cancer Research" I. Bernard Weinstein, New York, NY, and Carlo M. Croce, Philadelphia, PA (A special symposium celebrating the 50th Anniversary of the AACR's journal, *Cancer Research*)
- "Genomic Instability: Implications for Carcinogenesis and Therapy" Janet D. Rowley, Chicago, IL
- "Molecular Mechanisms of Tumor Suppressor Genes and Oncogenes" Lewis Williams, San Francisco, CA
- "Cancer and Development" George F. Vande Woude, Frederick, MD
- "Molecular Pathogenesis of Lung Cancer" John D. Minna, Bethesda, MD
- "Negative Growth Regulators" Harold L. Moses, Nashville, TN
- "Multiple Primary Cancer: Epidemiology and Molecular Mechanisms" Louise C. Strong, Houston, TX
- "Molecular Biology of DNA Damage and Repair" Larry H. Thompson, Livermore, CA
- "Cell Cycle Control: Yeast to Humans" Fred Cross, New York, NY
- "Hormones and Cancer" Marc E. Lippman, Washington, DC
- "Ethnic Differences in Cancer Risk" Pelayo Correa, New Orleans, LA
- "Chemoprevention" Gary D. Stoner, Toledo, OH
- "Recombinant DNA Approaches to Drug Development" Ira Pastan, Bethesda, MD
- "Nuclear Matrix, Gene Regulation, and Cancer" Sheldon Penman, Cambridge, MA
- "Molecular Epidemiology" Gerald N. Wogan, Cambridge, MA
- "Current Status of the Human Genome Project" Mortimer L. Mendelsohn, Livermore, CA
- "Clonal Evolution of Cancer" Peter C. Nowell, Philadelphia, PA
- "Drug Delivery" Robert Langer, Cambridge, MA
- "Tumor Vaccines and Active Immunotherapy" Ronald B. Herberman, Pittsburgh, PA

SPECIAL LECTURES

Presidential Address: I. Bernard Weinstein, New York, NY
Four Additional Award Lectures

SESSIONS OF PROFFERED PAPERS

Minisymposia, poster discussion sessions, and regular poster sessions will be organized from submitted papers in all areas of cancer research

ABSTRACT DEADLINE: NOVEMBER 30, 1990 INFORMATION, REGISTRATION FORMS, AND MEMBERSHIP APPLICATION FORMS

available immediately upon request from
American Association for Cancer Research
Public Ledger Building, Suite 816
Sixth and Chestnut Streets
Philadelphia, PA 19106
Telephone: 215-440-9300
FAX: 215-440-9313

Information also available on **AACR SPECIAL CONFERENCES IN CANCER RESEARCH**, the Association's series of smaller meetings focused on rapidly developing areas of molecular biology and cancer research

POSITIONS OPEN

RESEARCH ASSOCIATE. A position is available for an experienced operator of a flow cytometer and cell sorter as part of a basic research group studying the use of MAbs for diagnosis and therapy of breast cancer. Salary negotiable. Send résumé to: **Jerry A. Peterson, Ph.D., John Muir Cancer and Aging Research Institute, 2055 North Broadway, Walnut Creek, CA 94596. Telephone: 415-943-1167.**

Equal Opportunity Employer.

LABORATORY RESEARCH SPECIALIST. Needed for bacteriophage molecular genetics research. Salary is \$7.85 to \$11.33 per hour depending upon background, 40 hours per week. Requires bachelor's degree plus 2 years of laboratory research experience or master's degree in genetics/biochemistry, ability to perform experiments with molecular cloning, polymerase chain reaction, DNA sequence analysis and electrophoresis as well as all basic methods and instruments common to biochemistry/molecular biology. **Job order no. 3922383. Contact: Utah Job Service, 1234 South Main Street, P.O. Box 11750, Salt Lake City, UT 84147. Equal Opportunity Employer.**

ASSOCIATE STAFF SCIENTIST

Applicants are invited from individuals with a Ph.D., strong background in molecular biology, knowledge of bacteriology as demonstrated by thesis work or postdoctorate activities and an interest in systematics to establish a research program using molecular approaches to bacterial systematics, training staff on the use of molecular techniques, and participating in department programs/projects.

Curriculum vitae and three references and salary history should be sent to: **Personnel Department, American Type Culture Collection (ATCC), 12301 Parklawn Drive, Rockville, MD 20852. Equal Opportunity Employer, M/F.**

HEMOSTASIS

CryoLife, Inc., a biomedical company specializing in implantable tissue, offers an excellent career for a **RESEARCH SCIENTIST** and an **ASSOCIATE** specializing in hemostasis and wound healing. The positions require a bachelors with experience, master's degree, or Ph.D. in a relevant scientific discipline. Experience in blood coagulation and clot formation is desirable. Excellent salary and benefits, comprehensive health/insurance package, and 401K plan. Send résumés to: **Kelvin Brockbank, Ph.D., 2211 New Market Parkway, Suite 142, Marietta, GA 30067.**

ENVIRONMENTAL TOXICOLOGIST. Is sought for a multidisciplinary environmental technical studies program. Position involves review and interpretation of toxicological information on chemicals of interest to the forest products industry. Familiarity with federal (EPA, FDA, CPSC, OSHA) and state regulatory agency chemical management exposure programs essential. Knowledge of risk assessment procedures necessary. Strong communication skills required. Ph.D. and 2 to 5 years of experience highly desirable. Send curriculum vitae and salary history to: **Dr. John Pinkerton, National Council of the Paper Industry for Air and Stream Improvement, 260 Madison Avenue, New York, NY 10016-2401.**

The Department of Psychiatry at the University of California, Irvine, is seeking an **ACADEMICALLY ORIENTED RESEARCHER** (nontenured) to develop and supervise a research program involving positron-emitting radiopharmaceuticals for positron-emission tomography studies of regional cerebral metabolism and physiology. A Ph.D. in radiochemistry or nuclear chemistry, and supervisory/administrative experience of radioisotope production devices is essential, as well as experience in the operation and use of small biomedical cyclotrons. A minimum of 1 year of experience in the synthesis and development of compounds radiolabeled with fluorine-18, carbon-11, and oxygen-15 is also required. Salary and academic rank is negotiable and will be commensurate with the degree of training and previous experience. Send curriculum vitae and three references to: **William E. Bunney, Jr., M.D., Professor and Chair, Department of Psychiatry, UCIMC, 101 City Drive South, Building 53, Room 311, Orange, CA 92668.**

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

POSITIONS OPEN

SASKATCHEWAN CANCER FOUNDATION SASKATOON CANCER CENTRE SASKATOON, SASKATCHEWAN CANCER RESEARCH SCIENTIST

The Saskatoon Cancer Centre is seeking a research scientist with experience in such areas as tumor biology, oncogenes, growth factors, molecular biology, or related areas to join an existing group of researchers in a new cancer research group. The group will be housed in the Saskatoon Cancer Centre which contains over 1000 square meters of new laboratory space. Initial operating funds as well as funds for major equipment and support services are available. Appointments are of a permanent nature with the initial funding provided by a Terry Fox Regional Development Grant from the National Cancer Institute of Canada. Successful candidates will also receive appointments at the University of Saskatchewan commensurate with their level of experience. Candidates with a Ph.D. or M.D. degree and at least 2 years of postdoctoral training are encouraged to apply by submitting curriculum vitae and names of three references to: **Dr. S. A. Carlsen, Director of Research, Saskatoon Cancer Centre, 20 Campus Drive, Saskatoon, Saskatchewan, Canada S7N 4H4. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.**

The closing date for this competition is 15 January 1991.

ANNOUNCEMENTS

SOEH CALL FOR ABSTRACTS

Society for Occupational and Environmental Health Annual Conference, 25 to 27 March 1991, Hyatt Regency Crystal City, Virginia, entitled **Health Effects of Air Pollution: Impact of Clean Air Legislation** will examine how current scientific knowledge can be integrated into the implementation of clean air legislation through the oral presentation of research findings and poster presentations. Abstract proposal forms and registration information may be obtained by calling: **703-556-9222.**

REQUEST FOR RESEARCH PROPOSALS (RFPs). California Department of Food and Agriculture seeks research proposals for development of better traps and lures for medfly and Mexican fruit fly and for effective alternatives to aerial spraying for eradicating the two insects. Principal investigator must be associated with a United States institution, company, or agency. Overhead shall not exceed 10% of direct cost. RFP package and additional information can be obtained from: **Robert C. Roberson, CDFA, 1220 N Street, Room 340, P.O. Box 942871, Sacramento, CA 94271-0001. Telephone: 916-445-4521.** RFPs accepted between 13 November and 31 December 1990 only.

COURSES AND TRAINING

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.**

FOURTH ANNUAL COMPLEX SYSTEMS SUMMER SCHOOL 2 TO 29 JUNE 1991 SANTA FE, NEW MEXICO

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Co-directors: **Lynn Nadel, Psychology, University of Arizona; Daniel Stein, Physics, University of Arizona.**

Information: **A. Sutherland, Santa Fe Institute, 1120 Canyon Road, Santa Fe, NM 87501. Telephone: 505-984-8800, FAX: 505-982-0565, email: csummerschool@sfi.santafe.edu.**

MEETINGS

FIRST NORDIC INTERDISCIPLINARY RESEARCH CONFERENCE ON THE GREENHOUSE EFFECT: METEOROLOGY, CLIMATOLOGY, EFFECTS, RISK MANAGEMENT, AND INTERIM CLIMATE MODIFICATION, COPENHAGEN DENMARK, 18 TO 20 FEBRUARY 1991

Program chairman: Professor Bert Bolin, Stockholm. Organized by: Symplex SciTech, Copenhagen. An international conference, with ample time allowed for discussion and attendance limited to 100 participants, that will take the results of the IPCC as its starting point and examine new concepts, science and technology for discovery, design, and use of collective Nordic strategies in a global context for reducing the risk from the greenhouse effect. Please send your abstract or intention to participate by 1 December 1990 and include a brief outline of your research interests. Contact: **Mr. Torben Bo Jansen, Institute for Applied Futures Studies, 7 Nr. Farimagsgade, Copenhagen, Denmark 1364. Telephone: 45-3315-7007. FAX: 45-3314-3332.**

MATHEMATICAL APPROACHES TO DNA SANTA FE, NEW MEXICO 24 TO 29 MARCH 1991

Topics: DNA sequence and map assembly, finding key features in sequence, data base searches, analysis of protein, protein folding and stability, modeling and simulation. Abstract deadline: 15 January 1991. Student travel funds available. Application deadline: 15 January 1991. For further information, contact: **Dr. S. J. Spengler, Program in Math and Molecular Biology, 214 Stanley Hall, University of California, Berkeley, CA 94720. FAX: 415-643-9290; E-mail: sylviaj@violet.berkeley.edu.**

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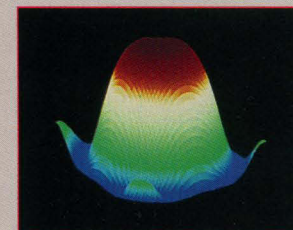
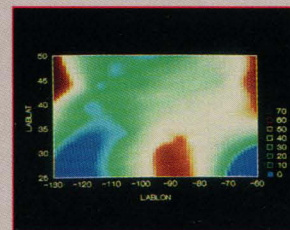
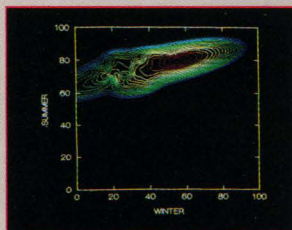
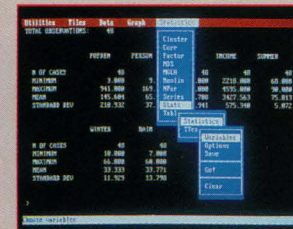
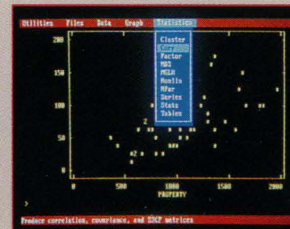
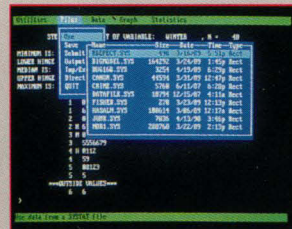
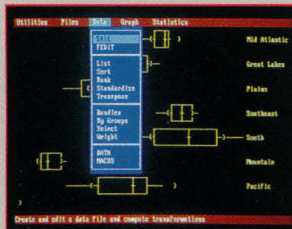
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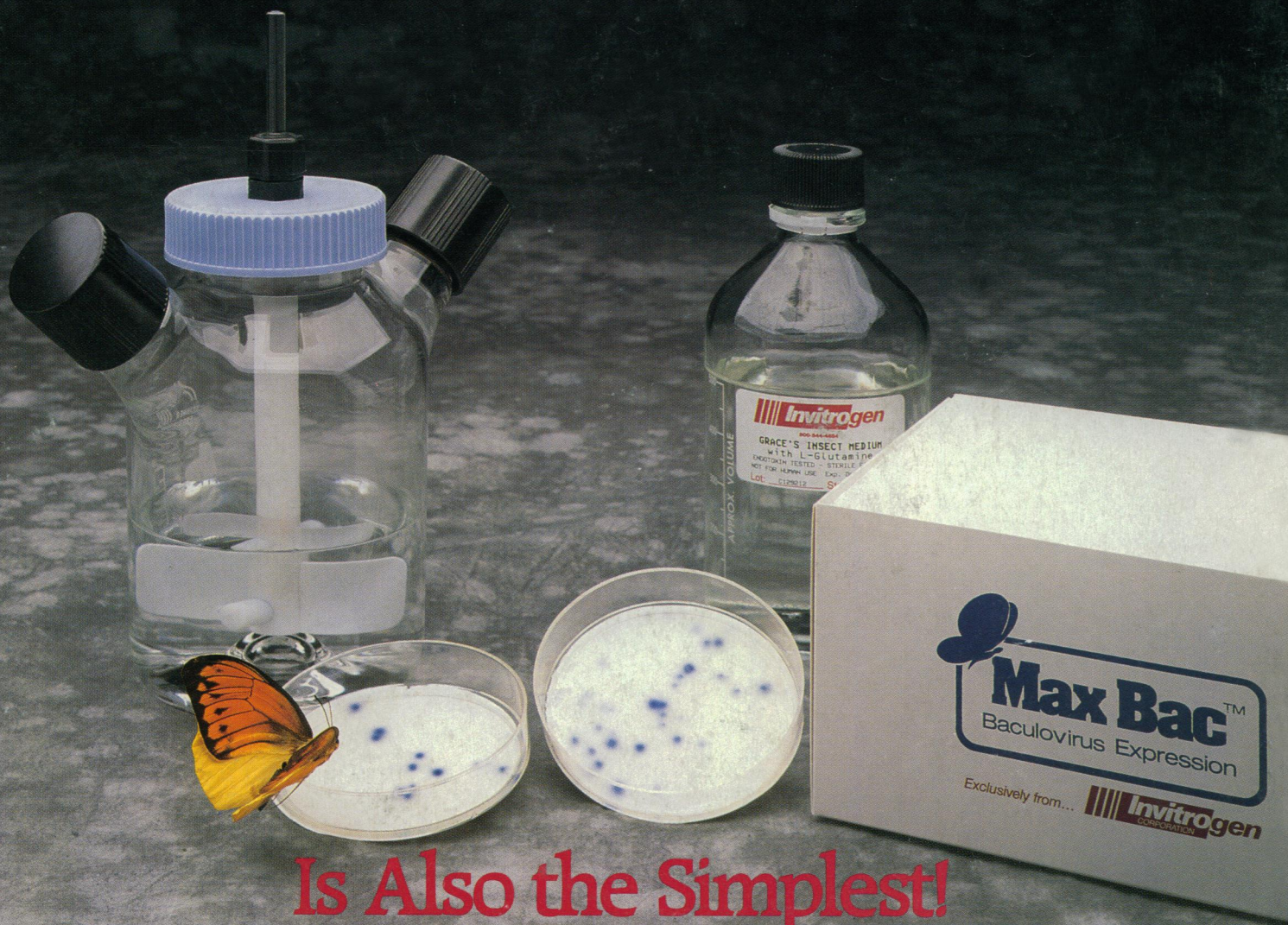
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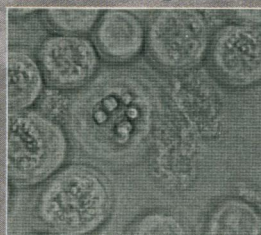


Figure 1. Infected Sf9 insect cells showing viral occlusions.

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