

found in a selection of representative Neolithic and Bronze Age archeological sites, grouped according to country or area. A brief chapter of conclusions, a chronological chart, maps showing the main archeological sites mentioned, a 20-page reference list, and an index complete the volume.—K.L.

Books Received

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Applied Sedimentology. Richard C. Selley. Academic Press, San Diego, CA, 1988. xii, 446 pp., illus., + plates. \$79.50; paper, \$34.

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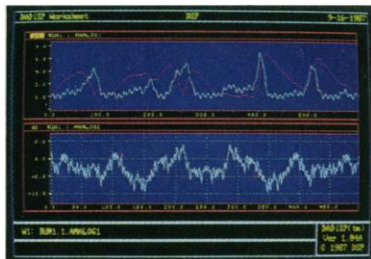
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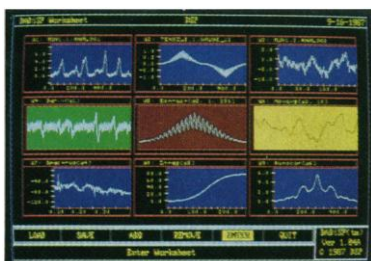
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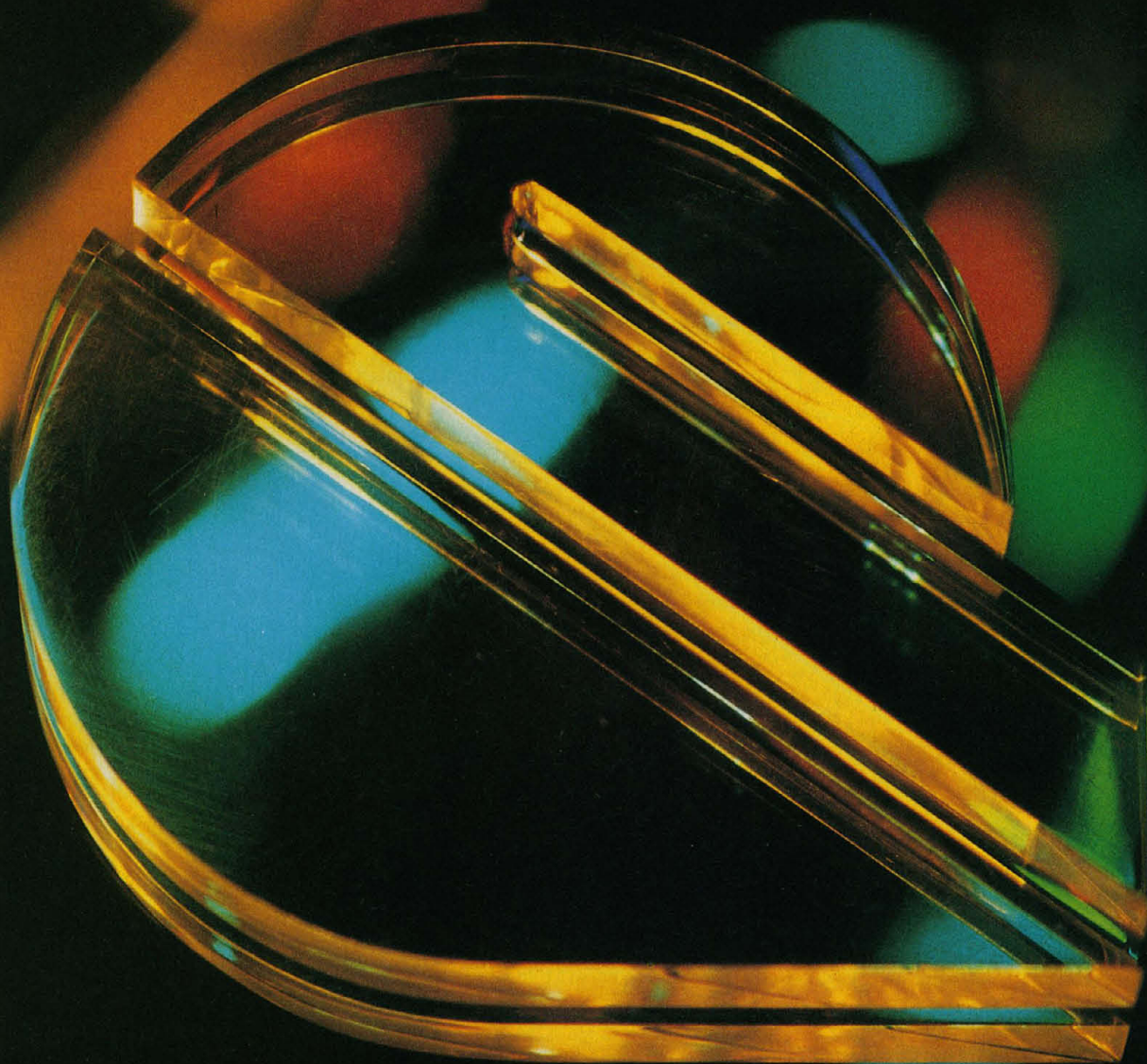
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8th Workshop on Development and Function of the Reproductive Organs

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Scientific Organization: N. Josso (F)

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Rapallo, Italy/June 8-10
Scientific Organization: R.H. Asch (USA) and L. De Cecco (I)

Membrane Technology in Clinical Pathology, Biochemistry and Pharmacology

L'Aquila, Italy/June 19-23
Scientific Organization: R. Verna (I), R.P. Blumenthal (USA), J.A. Hannover (USA) and R.P. Garay (F)

Cardiovascular and Neurological Function and Ovarian Secretions

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Scientific Organization: F. Naftolin (USA)

Establishment of a Successful Human Pregnancy

Cambridge, U.K./September 21-23
Scientific Organization: R.G. Edwards (UK)

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Scientific Organization: P.C. Sizonenko (CH) and M. Aubert (CH)

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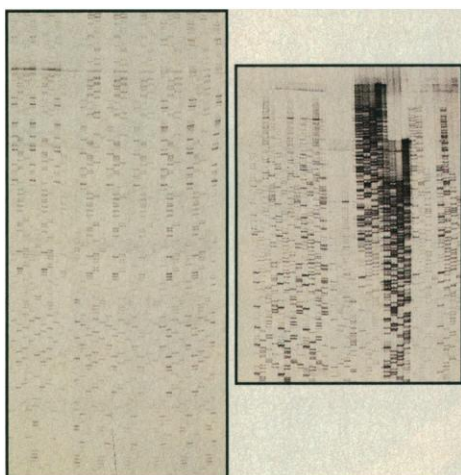
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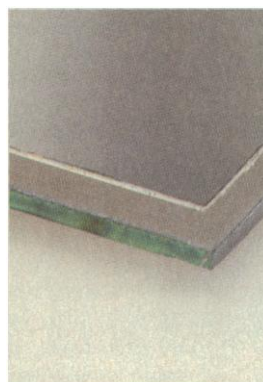


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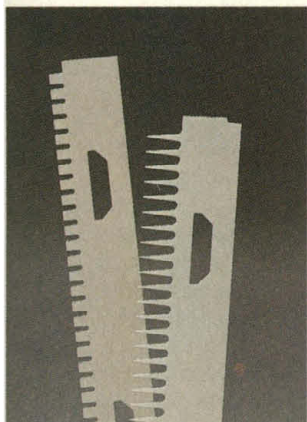
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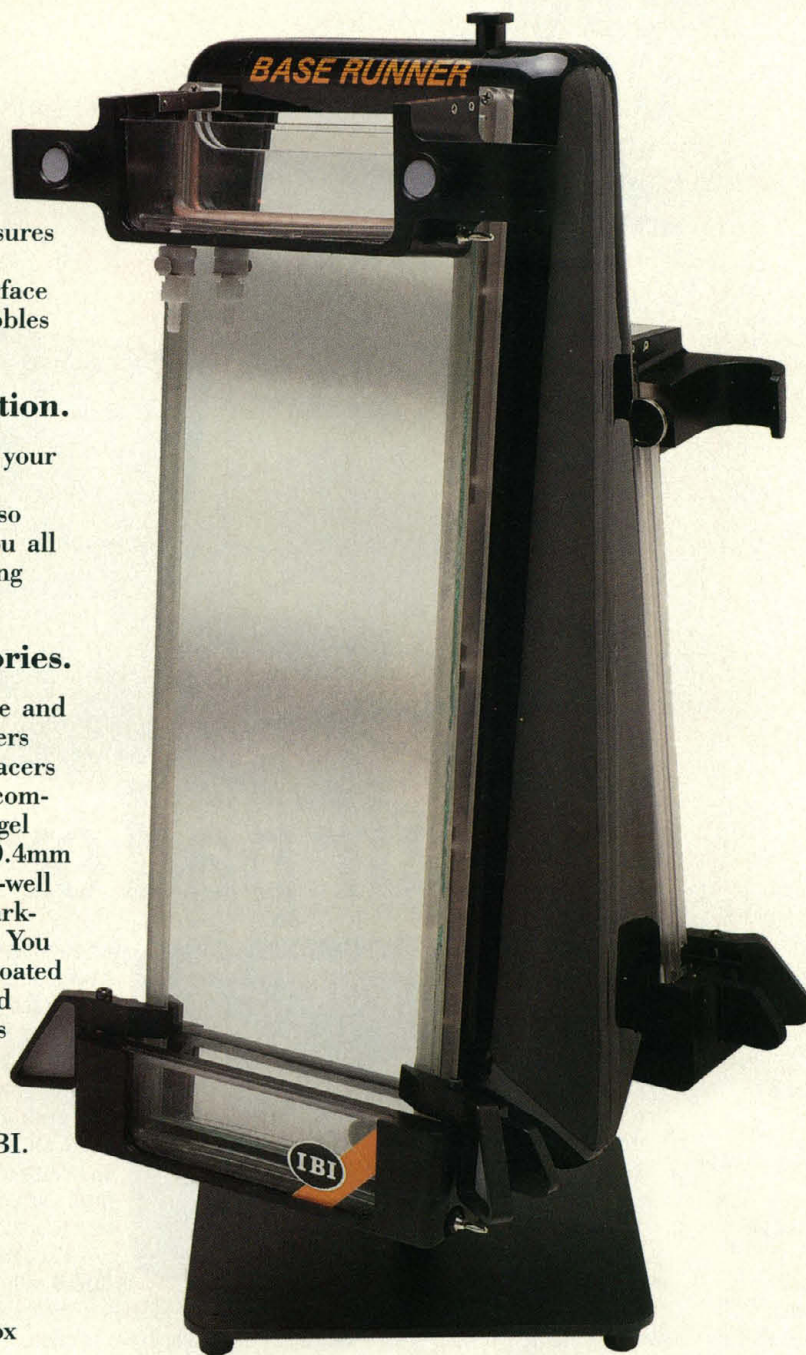
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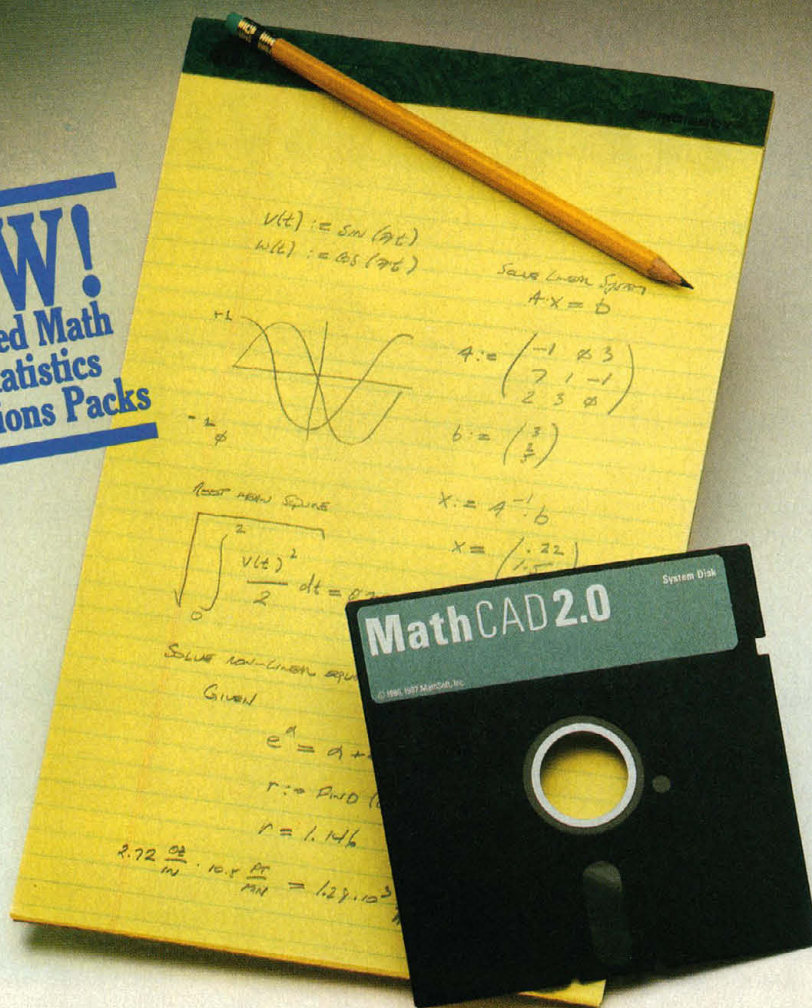
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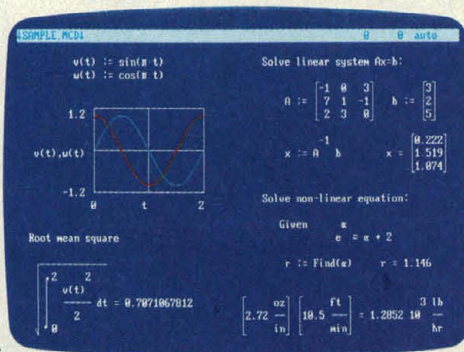
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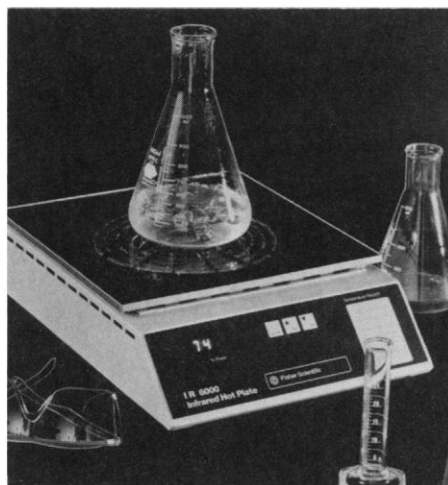
Protein Kinase C

Protein kinase C, a possible receptor protein of phorbol esters, is available. It has a protein concentration of 52 $\mu\text{g/ml}$ and a specific activity of 3.1 $\mu\text{mol}/(\text{min mg})$. It contains less than 2% lipid-independent kinase. Lipidex. Circle 483.

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.

Infrared Hot Plate

The IR-6000 hot plate heats with infrared electromagnetic radiation instead of by conduction. The hot plate can reach a temperature of 615°C and can bring 1 liter of water in a 1.5-liter Erlenmeyer flask to a boil in less than 12 minutes. Such infrared heating is more uniform than conductive heating, because the shape and flatness of the vessel



bottom are irrelevant. Heat is continuously adjustable from 1% to 99%, and the unit remembers power settings after being turned off. The IR-6000 has a 30 cm by 30 cm black glass-ceramic surface. \$650. Fisher Scientific. Circle 485.

Purification System for Phosphotyrosyl Proteins

The Immunoaffinity System isolates proteins phosphorylated on tyrosine residues. Proteins containing phosphoserine, phosphothreonine, or phosphohistidine are not detected. The system is based on monoclonal antibodies to phosphotyrosine. All required components are supplied in the kit. Oncogene Science. Circle 478.

Water-Jacketed Incubator

Model 3193 is a modular, stackable water-jacketed incubator controlled by a microprocessor. All settings are controlled by a touch pad, and power fluctuations do not disrupt set points. Cultures are always visible, because an automatic heating system prevents condensation on the inner glass door. The exterior is painted with polyurethane enamel, and the interior is stainless steel with six adjustable shelves. For additional insulation, the unit contains fiber glass insulation. Forma Scientific. Circle 479.

Scanning Electron Microscope

The DSM 960 is a digital scanning electron microscope. A television monitor displays the image captured by an integrated frame store. Although micrographs can be taken for documentation purposes, the frame-store images can be stored instead on laser disks, still-frame video recorders, and high-resolution video printers. The DSM 960's microprocessor controls camera contrast, brightness, and gamma response; micrographs can be transferred from the frame buffer in 6 s or can be shot on-line at higher pixel densities. The specimen chamber measures 270 by 310 by 270 mm, and the five-axis stage is eucentric and can move 80 mm laterally. Other features include autofocus, electronic scan rotation, dynamic focus, variable raster, six-function gamma control, and a full alphanumeric keyboard. Carl Zeiss, Electron Optics Division. Circle 484.

Literature

The *Bravo Slide Maker* brochure describes a machine for turning any flat 5 inch by 7 inch (13 cm by 18 cm) or 8.5 inch by 11 inch (22 cm by 28 cm) hardcopy into a color, black-and-white, or white-on-blue 35-mm slide, overhead transparency, or photographic print within a few minutes. Scientific Instrument Services. Circle 467.

TLC Scanner II describes a scanner for both thin-layer chromatography and electrophoresis. CAMAG (Switzerland). Circle 493.

Research Products Catalog 1988-1989 features more than 900 chemicals for amino acid analysis, biochemistry, chromatography, colloidal titration, cross-linking, electron spin resonance, immunology, neurochemistry, cell culture, and nucleic acid synthesis. Wako Chemicals USA. Circle 494.

The *G88-9 Catalog* lists gas and liquid flowmeters, as well as gauges, syringes, valves, and Warburg instruments. Gilmont Instruments. Circle 495.

Chromatography, Electrophoresis, Immunochemistry, Molecular Biology, HPLC, Liquid Handling is a catalog of ion-exchange resins, desalting columns, gel dryers, standards and kits for blot detection, and other products for techniques such as high-performance liquid chromatography (HPLC). Bio-Rad Laboratories, Chemical Division. Circle 498.

Microcarrier Beads is a 2-page data sheet about glass and collagen coated-plastic microcarrier beads. Bellco Biotechnology. Circle 499.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, 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 ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date). For deadlines for display advertising, please contact Scherago Associates.

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$38.00 per line; \$380 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines \times \$38.00 = approximate cost of ad. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

CANCELLATION POLICY:

NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

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

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

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

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Cytogeneticist, M.S./M.B.A. Currently laboratory supervisor for private clinical center. Two years of experience with in situ, blood, bone marrow, and solid tissue culture techniques. Seeking similar position utilizing expertise in both science and business management. Certified. Box 166, **SCIENCE**.

Flow Cytometry Operator experienced in immunofluorescence and cell cycle analysis, lymphokine activation, membrane potential and sorting. Available immediately. Will relocate. 2558 South King Road #253, San Jose, CA 95122.

Japanese Life Sciences Translations: articles, patents, opposition statements, other documents translated from Japanese in cell biology, microbiology, mycology, plant pathology, immunology, pharmacology, and related fields. 1025 Laurel Street #3, Menlo Park, CA 94025. Telephone: 415-321-6317.

POSITIONS OPEN

Beloit College has an **ADJUNCT ASSISTANT PROFESSOR** position for January 1989 through May 1990 to teach biological issues for nonmajors and one other biology course per semester. Candidates must be committed to quality teaching, have interests in the environment, women's studies, and computers, and be eager to collaborate in undergraduate research. Applications received by 5 December 1988 will receive full consideration, but later applications may be considered. Send application including curriculum vitae and names of three references to: **J. R. Jungck, Chairperson of Biology, Beloit College, 700 College Street, Beloit, WI 53511.** *Beloit College is an Equal Opportunity/Affirmative Action Employer.*

AGRONOMIST—CROP MODELER: Conduct forage crop-livestock research using plant physiology and ruminant nutrition principles to develop dynamic simulation models of forage-livestock systems for northeast dairy systems. Ph.D. in agronomy or crop science required. Minimum 2-year experience in forage research and development of crop-soil-atmosphere systems simulation models. Forty hours per week, Monday through Friday, \$30,000 per year. Send résumé: **Sunny Valley Foundation, 4 Sunny Valley Lane, New Milford, CT 06776.**

AQUATIC ECOLOGIST ARIZONA STATE UNIVERSITY

The Department of Zoology at Arizona State University invites applications for a tenure-track faculty position in aquatic ecology at the assistant professor level. The successful candidate will be expected to excel in research and teaching. Projected starting date is 15 August 1989 and applications should be received by 1 January 1989. Send curriculum vitae, statement of research and teaching interests, selected reprints, and at least three letters of recommendation to: **Dr. Michael C. Moore, Chair, Aquatic Ecology Search Committee, Department of Zoology, Arizona State University, Tempe, AZ 85287-1501.** Applications from two individuals for a single shared appointment will be considered. *Arizona State University is an Equal Employment Opportunity/Affirmative Action/Title IX Employer. Women and minorities are strongly encouraged to apply.*

ASSISTANT DEAN

The School for Field Studies (SFS), an international educational institution, is searching for an individual to assist the Dean in development, support, and evaluation of courses including curriculum, development, faculty searches and monitoring. The assistant dean develops and analyzes information on new and on-going SFS conservation biology courses in the U.S. and abroad. She/he manages communications with field operations and with students preparing for SFS courses.

Qualifications:

Masters degree (Ph.D. preferably) in environmental field plus experience in management or masters degree in administration and experience in environmental field, preferably including research.

Strong administrative skills including record keeping and data analysis.

Excellent interpersonal, written, and oral communication skills.

Commitment to experimental and alternative education.

International/intercultural knowledge.

Flexibility to adjust to rapidly changing demands.

Starting salary: \$28,000 to \$32,000. Start date: As soon as possible. Please send curriculum vitae to:

Office of the Dean
School for Field Studies
16 Broadway
Beverly, MA 01915

ASSISTANT PROFESSOR, tenure-track position for Ph.D. with broad training in biological sciences. Successful candidate will be expected to at least teach vertebrate physiology and anatomy courses and supervise undergraduate research. Send résumé, transcripts, reprints, and three letters of recommendation by 15 February 1989 to: **Dr. David B. Czarnecki, Chair, Department of Biology, Loras College, Dubuque, IA 52004-0178.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSIONAL SCIENTIST PLANT PATHOLOGIST/ECOLOGIST

The Section of Botany and Plant Pathology, Illinois Natural History Survey, located on the University of Illinois campus at Urbana-Champaign, invites applications for a full-time professional research position focusing on plant pathogens/diseases in shaping the genetic structure of, and ecological interactions within, native plant populations. A Ph.D. degree with a research specialization in plant pathology or ecology, is required; postdoctoral experience is preferred. The successful candidate will be expected to develop a vigorous, innovative, and independent research program that examines the roles of plant pathogens in natural populations and communities and in the context of diversity theory, maintenance of polymorphisms, resistance mechanisms, occurrence of co-evolutionary interactions, eradication of exotic species by biological means, or environmental stress. Opportunities to teach and advise graduate students are available by affiliation with an academic department at the University of Illinois. Salary will be commensurate with qualifications and experience; starting date is 1 June 1989.

Applicants should submit a résumé, copies of representative reprints, a brief statement of future research goals, and have three letters of reference sent, all to be received by 9 December 1988, to: **Dr. Anton G. Endress, Illinois Natural History Survey, 172 Natural Resources Building, MC-652, 607 East Peabody Drive, Champaign, IL 61820-6970; telephone: 217-244-2163.**

The Illinois Natural History Survey is an Affirmative Action/Equal Opportunity Employer.

Women and minority candidates are encouraged to apply.

ASSISTANT PROFESSOR. Stored-product entomology. Tenure-track. Research (60%). Management of stored-product insects. Develop a program in a specific research area to complement existing programs. Areas of research may include, but are not restricted to, population ecology, chemical ecology, biological control, host resistance, insect pest management. Work cooperatively with scientists in Department of Grain Science and US Grain Marketing Laboratory. Teach (40%): (i) undergraduate course, Economic Entomology, once per year, (ii) graduate course in stored-product entomology alternate years, and (iii) provide leadership for the College Crop Protection Curriculum. Ph.D. in entomology required. Interest or experience that demonstrates potential to excel in research, teaching and student advising. Application deadline 6 January 1989. Send letter of application, résumé, transcripts and names and addresses of three references to: **Dr. R. G. Helgesen, Department of Entomology, 123 Waters Hall, Kansas State University, Manhattan, KS 66506.** *Kansas State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ASSISTANT PROFESSOR (nontenure track) position available for person with M.D. or Ph.D. in biochemistry and at least 2 years of experience in DNA analysis, including gene mapping, gene amplification, cloning and sequence analysis. The candidate will become a member of a research team involved in studies of selected hemoglobinopathies and will be supported by NIH grants. Salary negotiable. Application deadline is 30 November 1988. Send résumé and two references to: **Dr. T. H. J. Huisman, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. A tenure-track appointment is available to a Ph.D. with postdoctoral experience in the Department of Urology of the Albert Einstein College of Medicine/Montefiore Medical Center. Individuals with training in signal transduction with application to pathologic processes that would integrate into and further develop our ongoing, funded program of the study of vascular and genitourinary smooth muscle at the receptor, effector or individual cell electrophysiological level are encouraged to apply. Applicants should submit curriculum vitae and description of research interest to: **Arnold Melman, M.D., Chairman, Department of Urology, Montefiore Medical Center, 111 East 210 Street, Bronx, NY 10467.** *An Equal Opportunity Employer M/F.*

POSITIONS OPEN

Ohio State University Department of Biochemistry invites applications for two 9-month tenure-track faculty positions at the level of **ASSISTANT PROFESSOR** available 1 October 1989 or later. We are seeking individuals from any area of biochemistry or molecular biology, but are particularly interested in candidates with expertise in proteins and protein engineering, including the areas of enzymology, membranes and membrane receptors, growth factors, signal transduction, and neurobiochemistry. Candidates should have a Ph.D., postdoctoral experience and a strong record of research productivity. Please submit a résumé, a concise statement of research interests, and the names and addresses of three references to: **Faculty Search Committee, Department of Biochemistry, Ohio State University, 484 West 12th Avenue, Columbus, OH 43210**. Review of applications will begin 1 January. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR (tenure-track). Qualifications: earned Ph.D. in the biological sciences (genetic engineering/aquaculture), some university teaching experience and evidence of grant and publication productivity. The successful applicant will teach and will establish a funded research program dealing with the genetics/cell biology of aquatic organisms. Forward application, curriculum vitae and have three letters of reference sent by 16 January 1989 to: **Office of Faculty/Staff Relations, SUNY College at Brockport, 408 Allen Administration Building, Brockport, NY 14420**. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR: Applications are invited for a tenure-track assistant professor position in the Department of Veterinary Biomedical Sciences, College of Veterinary Medicine, University of Missouri-Columbia. The successful applicant is expected to develop a strong research program capable of attracting external funding. Preference will be given to applicants utilizing a molecular approach to muscle membrane structure and function although individuals with a demonstrated expertise and postdoctoral experience in molecular biology are encouraged to apply. D.V.M. and/or Ph.D. required. Depending upon qualifications of the applicant, a dual appointment at the Dalton Research Center will be considered. Teaching requirement includes lectures in biochemistry to first-year veterinary medical and graduate students. Interested individuals should submit curriculum vitae, a brief outline of future research plans, and a reference list to:

Dr. Calvin C. Hale
Veterinary Biomedical Sciences
College of Veterinary Medicine
University of Missouri-Columbia
Columbia, MO 65211

The University of Missouri is an Equal Opportunity Employer.

ASSISTANT PROFESSOR: Applications are invited for a tenure-track position in biology to begin in August, 1989. The research area for this position is open, but the successful candidate must be able to teach comparative anatomy to majors and human anatomy to students planning careers in nursing and the allied health sciences. She/he will also teach introductory biology and an appropriate upper level course and will be expected to seek extramural funding to support an active research program which will involve undergraduate students. Postdoctoral experience is preferred. *Women and minority candidates are strongly encouraged to apply.* Hope College is a distinguished liberal arts college with a strong tradition in science and undergraduate research. It is affiliated with the Reformed Church in America.

Applicants should arrange to have curriculum vitae, transcripts, a statement of teaching competencies, an outline of proposed research, and three letters of recommendation forwarded to:

Dr. Donald Cronkite, Chairperson
Department of Biology
Hope College
Holland, MI 49423

Deadline for applications is 15 December 1988.

Hope College is an Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF MEAT AND ANIMAL SCIENCE UNIVERSITY OF WISCONSIN MADISON, WISCONSIN 53706

Large-Animal Growth Biologist, capable of applying the modern techniques of cellular and molecular biology, biochemistry, endocrinology, or genetics to the solution of problems concerning growth of domestic animals.

The candidate will have the responsibility to share in teaching undergraduate courses in beef production. There will be an opportunity to develop graduate teaching in areas of the candidate's interest. Position responsibilities are 60% research and 40% teaching.

The candidate is expected to develop a substantial research program and to collaborate in research with other scientists on campus and to bring their expertise to bear on problems of food producing animals.

It is expected that the candidate will be of such caliber to qualify for participation in one or more of the campus interdisciplinary training programs.

Candidate must have a Ph.D. degree and preferably postdoctoral training. Position is presently available.

Applications are due 31 January 1989, or until a satisfactory candidate is found. Application, curriculum vitae and three letters of reference should be sent to:

Jack Rutledge, Chairman
Meat and Animal Science Department
1675 Observatory Drive
University of Wisconsin
Madison, WI 53706

The University of Wisconsin provides Equal Opportunities in programs and employment.

ASSISTANT PROFESSOR BEHAVIORAL NEUROSCIENCE

The Department of Behavioral Neuroscience at the University of Pittsburgh seeks applicants for a tenure-track position which could begin in the fall 1989. Applicants should be interested in the involvement of second messenger systems in neural function and/or in molecular neurobiology. Applicants will be selected for interviews on the basis of their record of research accomplishment, their potential for developing a strong and interactive research program, and their ability to participate in undergraduate and graduate education. Curriculum vitae, selected reprints, a brief statement of future research interests, and three letters of reference should be sent to: **Faculty Search Committee, Department of Behavioral Neuroscience, University of Pittsburgh, Pittsburgh, PA 15260**. Applications will be reviewed beginning 15 January 1989.

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

The Department of Biological Sciences, Dartmouth College, invites applications for a full-time, tenure-track position at the **ASSISTANT PROFESSOR** level in **CELL BIOLOGY**, beginning July 1989. Applicants should have completed at least 2 years of relevant postdoctoral experience. While applications from individuals in any area of cell biology are welcome, we are particularly interested in those using modern molecular techniques to address problems in cell division, chromatin structure, or molecular targeting. The successful candidate will initiate a vigorous, independent research program that will attract outside funding, enlist graduate student participation, and provide research experiences for exceptional undergraduates; participation in the undergraduate and graduate teaching programs of the department is also required. The College offers a graduate start-up package of major equipment plus funds for expendable supplies, in addition to resources that include facilities for DNA and peptide synthesis, digital image processing, TEM, SEM, etc. Please send letters of application, curriculum vitae, reprints, a statement of research and teaching interests, and at least three letters of recommendation to: **Search Committee, Biological Sciences, Dartmouth College, Hanover, NH 03755**. Application review will begin on 10 January 1989. *Dartmouth College is an Equal Opportunity/Affirmative Action Employer. Applications from women and members of minority groups are strongly encouraged.*

POSITIONS OPEN

UNIVERSITY OF WASHINGTON SEATTLE, WASHINGTON

Tenure-track position available, jointly appointed by the Institute for Environmental Studies and the Department of Economics. Candidates with research experience or an established interest in natural resource and environmental economics are sought for an appointment at the **ASSISTANT PROFESSOR** level. Evidence of intellectual promise, strong research orientation, and teaching ability are the principle criteria for selection.

Applicants should submit curriculum vitae and names and addresses of four references before 31 December 1988 to: **Kai N. Lee, Chair, IES Search Committee, Institute for Environmental Studies, EM-12, University of Washington, Seattle, WA 98195**. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR—BIOLOGY

The joint Biology Department of St. John's University and the College of St. Benedict seeks to fill a tenure-track position beginning fall term 1989. The successful candidate will be responsible for a year-long human anatomy/physiology course for nursing students, and general physiology (fall term) and comparative physiology (spring term), both upper division courses. A strong commitment to undergraduate liberal arts education and the ability to direct upper division students in independent research is highly desirable. A Ph.D. is required and expertise in comparative or ecological physiology is preferred. Send curriculum vitae, three letters of recommendation, and transcripts to: **Personnel Director, St. John's University, Collegeville, MN 56321**. Applications received after 16 December 1988 cannot be guaranteed consideration. *Women and minorities are encouraged to apply.*

ASSISTANT PROFESSOR ECONOMIC ENTOMOLOGY

Tenure-track position with equal research and extension responsibilities and a teaching commitment of one course per year related to insect pest management. Research on insects injurious to Utah crops. Ph.D. with broad training in entomology required. Experience in extension, IPM, modeling, or related area of economic entomology desirable. Applications accepted until 6 January 1989 or until a suitable candidate is selected. Submit résumé, transcripts, letter of professional goals, and three letters of recommendation to: **Chairman, Entomology Search Committee, Department of Biology, Utah State University, Logan, UT 84322-5305**.

USU is an Affirmative Action/Equal Opportunity and IRCA Employer.

ASSISTANT PROFESSOR MOLECULAR BIOPHYSICS

The Department of Chemistry at Rensselaer Polytechnic Institute is recruiting for a junior faculty position in the area of molecular biophysics. Applicants in any field of specialization are welcome but special consideration will be given to those whose work is in macromolecular crystallography. Applicants should send a current curriculum vitae, list of publications, brief summary of proposed area of research, and have three letters of recommendation no later than 15 December 1988 and forwarded to: **Professor B. A. Wallace, Chairman, Search Committee in Molecular and Biophysics, Rensselaer Polytechnic Institute, Troy, NY, 12180-3590**.

ASSISTANT PROFESSOR IN MOLECULAR PATHOLOGY. The University of Arizona, Department of Pathology invites application for a full-time tenure-track faculty position in pathology. Applicants may be either Ph.D. or M.D. and must have demonstrated research expertise in one of the fields of molecular immunology, molecular aspects of disease pathogenesis, or molecular genetics. The candidate will be expected to develop a strong competitive research program and to teach molecular aspects of pathology to graduate and medical students. Submit curriculum vitae and letter of interest to: **Dr. Ray B. Nagle, Chairman of Search Committee, Department of Pathology, Arizona Health Sciences Center, Tucson, AZ 85724**. Applications accepted until 15 March 1989 or when the position is filled. *The University of Arizona is an Equal Employment/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR MICROBIOLOGY AND IMMUNOLOGY

An immediate opening exists for a 2-year appointment as an assistant professor in the Department of Microbiology and Immunology, the College of Science and Mathematics and the School of Medicine at Wright State University. Applicants must have a Ph.D. in microbiology or related field with postdoctoral experience in the area of molecular biology. Research experience in the area of pathogenesis of bacterial toxins desirable. Teaching responsibilities include a graduate course in microbial genetics and selected lectures in medical microbiology. Salary is commensurate with applicant's experience and regional data. Please submit curriculum vitae and three letters of reference to: **David J. Giron, Ph.D., Professor and Acting Chairman, Department of Microbiology and Immunology, 409 Oelman Hall, Wright State University, Dayton, OH 45435.** Closing date for receipt of applications is 30 November 1988. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR MOLECULAR NEUROBIOLOGY CASE WESTERN RESERVE UNIVERSITY

The newly established Center for Neurosciences at Case Western Reserve University School of Medicine has a tenure-track opening at the assistant professor level for a person using molecular biological techniques to study neural function. Candidates should have a strong background in molecular biology, at least 2 years of postdoctoral research experience, and should be ready to start an independent research program. Renovated laboratory space and start-up funds will be available. Teaching duties will involve lecturing on the Neurosciences to graduate and medical students. The Center for Neurosciences currently includes six primary faculty appointments and will expand over the next several years to approximately twice that size. In addition, more than fifteen neuroscientists with appointments in other departments play an active role in the research and teaching activities of the Center. The research interests of the current faculty are focused on neuronal development and neuronal plasticity in adult organisms. Interested candidates should send their curriculum vitae, a brief summary of their future research plans, and the names of four references to: **Dr. Story C. Landis, Center for Neurosciences, Case Western Reserve University School of Medicine, 2119 Abington Road, Cleveland, OH 44106-2333,** by 1 January 1989. *Case Western Reserve University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF BIOLOGY. The candidate will give some lectures in the courses in cell metabolism, cell biology, genetics and nutrition, and direct a seminar and teach a course in his/her specialty. A primary responsibility will be to design and direct laboratories in cell biology and metabolism. Ideal for the person who likes to interact with good students in small group settings and participate in a strong undergraduate research program. The position is available January 1989 and may continue through 1989 to 1990. Submit curriculum vitae along with names and telephone numbers of at least three references to: **Dr. E. Perry, Biology Department, Knox College, Galesburg, IL 61401.** Telephone: 309-343-0112. *Affirmative Action/Equal Opportunity Employer.*

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY ASSISTANT PROFESSOR TENURE-TRACK

The Department of Ecology and Evolutionary Biology at the University of Arizona seeks an investigator in the analysis of complex systems of biological origin. Areas of special interest include the origin and diversification of life, including evolution at molecular and cellular levels, and the genetics and evolution of temporal and spatial patterning in development, physiology, or behavior in multicellular organisms. This position will probably be filled at the junior level. Mail curriculum vitae, statement of research plans, reprints or preprints, and arrange to have letters from at least three referees sent to: **Conrad A. Istock, Head, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721.** The deadline for applications is 15 December 1988, or until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF COLORADO BOULDER

The Department of Chemistry and Biochemistry invites applications for two tenure-track faculty positions in biochemistry commencing January 1990. The appointments are part of a major development in biochemistry, including expansion and improvement of the facilities of the department. Although there is preference for candidates at the assistant professor level, applicants at the senior level will be considered. Applicants should have a Ph.D. in chemistry or biochemistry and a major commitment to conducting a vigorous and innovative research program in biochemistry. Highest priority is in x-ray crystallography or a related area of structural biochemistry; however applicants in all areas of biochemistry are welcome and those with approaches that interface with other areas of chemistry are encouraged. Applicants should send curriculum vitae, representative reprints, and statement of research plans and have three letters of reference sent to: **Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Colorado, Campus Box 215, Boulder, CO 80309-0215.** Applications will be evaluated beginning 1 December 1988 with a final application deadline of 2 January 1989. *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity in all areas. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.*

ASSISTANT PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE AT CHICAGO

The Department of Microbiology and Immunology invites applications at the level of assistant professor, tenure-track, from individuals with demonstrated excellence in molecular immunology, broadly defined. More senior applicants will also be considered. The successful candidate will be expected to develop a strong externally funded research program and to participate in graduate and medical student training. Generous space and start-up funds are available. Applications should provide the search committee with curriculum vitae, at least three letters of recommendation and a brief statement of future research interests and plans. The first series of candidates will be considered after 1 November 1988 and applications will be accepted until the position is filled. Starting dates can be September 1989 or thereafter.

Send applications to: **A. L. Kenter and S. Silver, Molecular Immunology Search Committee, Department of Microbiology and Immunology, University of Illinois College of Medicine at Chicago, P.O. Box 6998, Chicago, IL 60680.**

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

ASSISTANT/ASSOCIATE PROFESSOR. We invite applications for a tenure-track position available immediately. We seek individuals with a Ph.D. and at least 3 years of postdoctoral training to join a group investigating the structure of extracellular matrix and chondrocyte metabolism, and animal models of arthritis. For full consideration, applicants should submit curriculum vitae, a brief description of current research interests, and three letters of reference to: **Roland W. Moskowitz, M.D., Director, Rheumatic Disease Unit, Department of Medicine, University Hospitals, Cleveland, OH 44106.** *Case Western Reserve University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR. We invite applications for a tenure-track position available immediately. We seek an individual with an M.D. or M.D./Ph.D. with postdoctoral training in rheumatology and either immunology and/or molecular biology with a demonstrated research program in normal animal or human immunobiology and/or autoimmune diseases. For full consideration, applicants should submit curriculum vitae, a brief description of current research interests, and three letters of reference to: **Roland W. Moskowitz, M.D., Director, Rheumatic Disease Unit, Department of Medicine, University Hospitals, Cleveland, OH 44106.** *Case Western Reserve University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY BRANDEIS UNIVERSITY

A tenure-track position at the level of assistant professor is available in the Graduate Department of Biochemistry. We are seeking someone who plans to investigate basic mechanisms in molecular biology, in fields ranging from replication to gene expression. Curriculum vitae, statement of research interests, and at least three letters of recommendation should be sent to:

**Dr. Irwin B. Levitan
Chairman, Search Committee
Graduate Department of Biochemistry
Brandeis University
Waltham, MA 02254**

Brandeis University is an Equal Opportunity/Affirmative Action Employer. We are seeking highly qualified candidates from all segments of the scientific community.

ASSISTANT PROFESSOR OF PLANT MOLECULAR BIOLOGY

Applications are invited for a tenure-track faculty position at the assistant professor level in the Department of Plant Science at the University of Delaware. Candidates should be interested in utilizing molecular techniques for improving disease resistance and other agronomic traits in maize. The faculty member would be expected to work cooperatively with ongoing research programs in maize breeding, pathology, tissue culture, and soil microbiology. Opportunities for interaction with other molecular biologists within the College would be encouraged. Teaching responsibilities include a graduate level course consistent with the individual's background and department needs. Ph.D. and postdoctoral experience in plant molecular biology is required. Send a description of research interests and plans, curriculum vitae, official undergraduate and graduate transcripts, and three letters of recommendation by 31 January 1989 to:

**Dr. James A. Hawk
Department of Plant Science
Townsend Hall
University of Delaware
Newark, DE 19717-1303**

ASSISTANT PROFESSORSHIP

Applications are invited for the position of assistant professor in physical chemistry. Applicants with an emphasis toward experimental research are especially encouraged to apply. Applicants should arrange to have three letters of recommendation sent independently and should include curriculum vitae and a short statement of research interests. *Harvard University is an Affirmative Action/Equal Opportunity Employer. Applications from female and minority group members are welcome.* Applications and supporting material should be sent no later than 16 December 1988 to: **Chairman, Search Committee, Office of the Director, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138.**

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF ANATOMY LOYOLA UNIVERSITY OF CHICAGO STRITCH SCHOOL OF MEDICINE

The Department is seeking applicants with a Ph.D., M.D. or equivalent degree with research interests in immunobiology, molecular cell biology, or neuroimmunology to fill a full-time tenure-track position beginning on or after 1 July 1989. The applicant should have significant research experience and be capable of establishing and/or maintaining an independent research program. Primary teaching responsibilities will be in a clinically oriented gross anatomy course to medical and graduate students. Opportunities are available to participate in departmental and interdepartmental graduate training programs. Send curriculum vitae, list of publications, three letters of recommendation, and a summary of research interests by 15 January 1989 to: **Dr. John Clancy, Chairman, Department of Anatomy, Loyola University Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153.** *Loyola University of Chicago is an Equal Opportunity Educator and Employer. Qualified persons are not subject to discrimination on the basis of a handicap.*

SENIOR SCIENTISTS

Drug Metabolism and Disposition Research

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly is investing over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking self-motivated, innovative scientists to plan, organize, and manage programs in the area of drug metabolism.

Metabolism

- Doctoral-level individual desired to establish a laboratory program utilizing basic and applied approaches to study the metabolic disposition of drugs in laboratory animals.
- Strong background needed in analytical methods, chemistry, and pharmacology.
- Experience necessary in HPLC and in developing other quantitative bioanalytical methods to study absorption, distribution, metabolism and excretion of drugs in animal models.
- Postdoctoral experience desirable.

Kinetics/Disposition

- Doctoral-level scientist wanted to establish a laboratory program to evaluate the physiologic/pharmacologic mechanisms governing the behavior of drugs in laboratory animals.
- Strong background in pharmacologic and pharmacokinetic mechanisms as it relates to drug disposition is essential.
- An understanding of analytical methods and chemistry is preferable.
- Postdoctoral experience desirable.

In addition, these scientists must have the leadership capabilities needed—technical, communication, interpersonal, and organizational skills—to build a research program.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *curriculum vitae* to:

**John W. Crooks, Manager
Ph.D. Recruitment (DMD)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285**



Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR GRADUATE SCHOOL OF OCEANOGRAPHY (GSO)

Limited to December 1991 with possibility of becoming a tenure-track position. Teach and pursue active research program in the application of satellite-derived data to oceanographic and ecosystem problems with specialty in phytoplankton ecophysiology. Active involvement in the use of the Graduate School of Oceanography's Oceanographic Remote Sensing Lab now operating 4 Vaxes with 4-display system (one at sea) using the University of Miami satellite data processing software for oceanographic applications and LAS for coastal and terrestrial applications. Interact with groups in biological and other branches of oceanography. Advise graduate students. Assistant: Recent Ph.D. in biological oceanography, postdoctoral experience and must show promise or commitment of a research program. Associate: Ph.D. in biological oceanography, postdoctoral experience, and a demonstrated record of strong, independent research. Both require demonstrated competence in satellite data analysis. Submit letter of application and résumé by 25 November 1988 to:

H. Winn, Search Committee Chair
Assistant/Associate Professor,
GSO (090488) Position
The University of Rhode Island
P.O. Box 9
Kingston, RI 02881

An Affirmative Action/Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSOR NEUROSCIENTIST

Applications are invited for a tenure-track position at the assistant or associate professor level to begin on or after 1 July 1989. Applicants should have primary research interests in cellular or molecular biology of the nervous system and have postgraduate experience demonstrating a strong commitment to research. Applicants at the associate level should have demonstrated an independent and funded research program. Teaching responsibilities will be in medical and dental neuroanatomy. Applicants should submit curriculum vitae, a statement of present and future research interests and names of three references by 1 January 1989 to: **Dr. Barry S. Eckert, Search Committee Chair, Department of Anatomical Sciences, School of Medicine, 317 Farber Hall, State University of New York at Buffalo, Buffalo, NY 14214.**

The State University of New York at Buffalo is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

The Department of Biomedical Sciences at the University of Illinois College of Medicine at Rockford Rockford invites applications for one or more tenure-track/tenured faculty positions. Candidates should have a doctoral degree in pharmacology or a related discipline. The successful applicant will participate in the teaching of pharmacology to medical students. Applications should include curriculum vitae, three representative reprints, a summary of current research activities and future research plans, and the names of at least three individuals from whom letters of reference may be solicited. Candidates should also state at which level they wish to be considered. Please send applications to: **Chairman, Search Committee, Department of Biomedical Sciences, University of Illinois College of Medicine at Rockford, 1601 Parkview Avenue, Rockford, IL 61107.** Applications should be reviewed by 1 December 1988. *The University of Illinois College of Medicine at Rockford is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSORS IN MICROBIOLOGY/IMMUNOLOGY. Several tenure-track faculty positions are available to talented investigators who can establish independent, high quality research programs in molecular aspects of microbiology, virology, and immunology. Excellent new facilities and attractive start-up funds available. Submit curriculum vitae, statement of research interest, and list of three references to: **Dr. Katherine Knight, Chairperson, Department of Microbiology, Loyola University of Chicago, Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153.** *Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSORS

Bradford College, a small liberal arts college 35 miles north of Boston, seeks to fill full-time permanent positions in biology and biochemistry for 1989 to 1990. Molecular/cell biologist to teach general biology, microbiology, immunology, genetics; biochemist to develop/teach course in biochemistry and lower level courses in biology and chemistry. Both involve teaching core scientific literacy course and directing undergraduate research. Ph.D. and collegiate teaching experience required. Submit letter, curriculum vitae, three references, and brief summary of research plans by 19 December 1988, to: **Dr. David L. Adams, Chair, Division of Natural Science and Mathematics, Bradford College, Bradford, MA 01835.**

Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE/OR FULL PROFESSOR OF BIOCHEMISTRY POSITIONS. Two research areas: one involves the studies of enzyme reaction mechanisms, protein-protein or ligand-protein interactions related to signal transduction or metabolic regulation using modern biochemical approaches, especially protein engineering. The second position is in the area of molecular biology of gene expression in vertebrate or cell culture systems at the level of transcriptional control and processing. We are seeking candidates with a strong commitment to developing an independent research program and teaching. Applicants seeking a tenured position must have current extramural funding and a record of significant research accomplishments. Applicants should provide curriculum vitae, names of three references and a statement of research plans. Send applications for the regulation or signal transduction position to: **Dr. James Vary** and for the gene expression position to: **Dr. Robert Storti, Department of Biochemistry, University of Illinois at Chicago, 1853 West Polk Street, Chicago, IL 60612.** Deadline is 1 February 1989 or until the positions are filled; foreign travel expenses will be paid. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE RESEARCH SCIENTIST. Perform research, employing both isothermal microcalorimetry and differential scanning microcalorimetry, on the thermodynamics of biochemical processes. Included in the biochemical processes to be studied will be: (i) The unfolding of proteins, and the effects of single and multiple mutations on the stability and unfolding of proteins; (ii) the interactions of proteins with lipids, nucleic acids and other proteins, and the effects of mutations on these interactions; (iii) the interactions of various drugs, such as adriamycin and other anti-cancer drugs, and other added substances on lipids in the form of model membranes. Requires a Ph.D. in chemistry. No specific experience required. Requires detailed knowledge of the principles of thermodynamics, and a broad knowledge of biochemistry. This requirement may be satisfied with evidence of completion of three university or college level courses or specific advanced research project work in each of these disciplines. Also requires 2 years of postdoctoral level training in calorimetric methods and procedures. Monday to Friday, 9:00 a.m. to 5:00 p.m.; \$21,000 per annum. Please send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order #3034978.

BIOCHEMIST

A small Midwest manufacturer of specialty ingredients for the animal feed industry seeks a biochemist to join its technical service group. The position involves traveling with the company's sales force to affect technical training in the field, and to meet with prospective clients concerning use of the company's products in animal feed. The individual will also be charged with the responsibility of coordinating field experiments with various universities, and writing of technical/sales bulletins. This position involves 70% travel in the United States and abroad. The successful candidate will possess excellent verbal and written communication skills and enjoy communicating science to the feed industry. The position requires a Ph.D. in biochemistry or related field. An excellent compensation package is offered.

Interested parties should submit their résumé to: **Jed Harms, Executive Director of Sales and Marketing, Kemlin Industries, Inc., P.O. Box 70, Des Moines, IA 50301.**

An Equal Opportunity Employer.

POSITIONS OPEN

TRUDEAU INSTITUTE, INC. BASIC RESEARCH SCIENTISTS

The Trudeau Institute is always interested in receiving applications for tenure-track, full-time research staff positions, from appropriately trained individuals. Appointments may be made at the assistant, associate, or full member (professor) levels, depending on scientific ability and past performance. Successful applicants will be expected to develop independent research programs in immunology, immunopathology, molecular immunology or related fields.

The Trudeau Institute is a free-standing, not-for-profit, basic research institute with modern facilities, up-to-date equipment, in-house animal production, efficient management and an international reputation for excellence. Current staff interests include: cancer immunology, transplantation immunology, immunity to infectious and parasitic diseases, regulation of immune responses, and the production and function of cytokines. Adequate start-up funding for new projects is available from Institute resources. Salaries and benefits are competitive, and working conditions are conducive to a productive career in research.

Applications consisting of curriculum vitae, the names and addresses of three references, and a brief description of research interests, should be addressed to:

Dr. Robert J. North, Director
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983

BEHAVIORAL NEUROSCIENTIST

The Department of Psychology of the University of Minnesota seeks applications for an assistant professor, tenure-track position from individuals specializing in the study of the neural mechanisms of memory, learning, motivation or perception. Applicants should have the Ph.D. Postdoctoral work desirable. The individual will be expected to initiate an active research program using neuroanatomical, electrophysiological, neuropharmacological or other modern approaches, preferably at the cellular level. Applicants should also have broad interests in brain/behavior relations compatible with teaching an undergraduate course in physiological psychology and participating in graduate instruction in psychology and the university-wide Graduate Neuroscience Program. Salary is competitive and will depend on the candidate's qualifications and experience. This is a faculty position, 100% time appointment during the academic year, with the initial appointment to begin 16 September 1989. *The University of Minnesota is an Equal Opportunity Employer and Educator and specifically invites and encourages applications from women and minorities.* Candidates should submit curriculum vitae, at least three letters of reference, recent publications, and a concise statement of long-term research interests to: **Professor Dwight A. Burkhardt, Chair, Neuroscience Search Committee, Psychology Department, University of Minnesota, 75 East River Road, Minneapolis, MN 55455.**

Application deadline: 1 December 1988.

BIOCHEMIST: Applications are invited for a tenure-track position in the chemistry department at Whitman College, a private liberal arts college offering an ACS-certified B.A. A recent Ph.D. in chemistry or biochemistry is required. Duties include teaching biochemistry, general chemistry lecture and laboratory, and direction of undergraduate research. Send transcripts, three letters of recommendation, curriculum vitae, and a description of teaching and research experience to: **D. L. Frasco, Chemistry Department, Whitman College, Walla Walla, WA 99362** by 15 January 1989. Rank and salary dependent on experience. *Whitman is an Affirmative Action/Equal Opportunity Employer.*

BIOCHEMISTRY—ASSISTANT PROFESSOR, tenure-track beginning 1 July 1989, Ph.D. in biochemistry with specialization in medicinal chemistry or molecular biology. Commitment to undergraduate education in a professional school environment. Teaching at the undergraduate level in courses of the college for which the candidate is qualified. Development of a research program is required. Postdoctoral or equivalent program is required. Submit résumé, three letters of recommendation, and official transcripts to: **M. Verderame, Ph.D., Chair, Department of Physical Sciences, Albany College of Pharmacy, 106 New Scotland Avenue, Albany, NY 12208.**

**C
MRC GROUP IN PROTEIN STRUCTURE AND FUNCTION
M**

University of Alberta, Edmonton

FACULTY POSITION IN X-RAY CRYSTALLOGRAPHY

The Medical Research Council of Canada Group in Protein Structure and Function at the University of Alberta invites applications for a Faculty position in the Department of Biochemistry. Applicants should have a strong background in protein/macromolecular crystallography and will be expected to develop a research project that will complement and contribute to the overall research efforts in the group. Appointments can be made at any level from Assistant to Full Professor depending upon the qualifications.

The MRC Group in Protein Structure and Function was established in 1974 and has undergone two successful renewals. In addition to X-ray crystallography, the major techniques of physical biochemistry are included in the hydrodynamic and spectroscopic methods, 2D nuclear magnetic resonance spectroscopy, protein micro-sequencing techniques, solid phase synthesis of peptides, recombinant DNA and protein engineering. The X-ray crystallographic laboratories are supported by excellent facilities, two single crystal diffractometers, two rotating anode generators, an SDMD system area detector with two detectors, two molecular graphics systems. The computing facilities at The University of Alberta are excellent. The University mainframe is an Amdahl 5870 operating under MTS. Access to supercomputing facilities is also possible at the Universities of Toronto (Cray) and Calgary (Cyber 205).

In accordance with Canada Immigration regulations, priority will be given to Canadian citizens and permanent residents. The deadline for the position is Dec. 31. Applicants should forward *curriculum vitae*, list of publications and names of three referees as soon as possible to Professor M.N.G. James, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada T6G 2H7.

The University of Alberta is committed to the principle of equity in employment.

ONCOLOGY RESEARCH

WASHINGTON DC AREA

Molecular Oncology, Inc. is a young, fast-growing biotech research company involved in the transfer of the latest molecular diagnostics to the clinical laboratory. If you're an enthusiastic individual with the demonstrated ability to apply advanced management and research skills to cancer diagnosis, we have a place for you on our team.

LABORATORY DIRECTOR—MOLECULAR BIOLOGY

Duties include the daily supervision of a staff of investigators examining the correlation of DNA arrangement and protein expression with tumor identification and progression. M.D., Ph.D. or M.S. degree with 2 to 5 years supervisory experience required.

LABORATORY DIRECTOR—CYTOMETRY

Responsible for the daily supervision of a staff of investigators applying the latest techniques in flow cytometry and image analysis to problems of protein expression and DNA analysis related to tumor diagnosis and progression. M.D., Ph.D. or M.S. degree with 2 to 5 years supervisory experience required.

Send employment history and c.v. to:



Molecular Oncology, Inc.
Personnel Manager
19 Firstfield Road
Gaithersburg, MD 20878

MOI is an equal opportunity employer.

Provost's Laboratory Safety Officer

The Provost's Laboratory Safety Officer is responsible for formulating needs, policies, and solutions related to health and safety in the academic units of the University. The Provost is Stanford's senior academic officer responsible for the University's teaching and research programs; the Laboratory Safety Officer works on the Provost's behalf to insure implementation of laboratory safety programs throughout the schools and academic departments in ways that best support the conduct of teaching and research at Stanford. The Safety Officer will be a key partner in the planning of academic laboratories and buildings with respect to standards used for hazardous agent containment facilities and equipment, and will be responsible for overseeing implementation of laboratory safety programs and systems within those research laboratories. This is a new position at Stanford, reporting within the Provost's Office to the University's Associate Dean of Research.

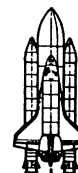
QUALIFICATIONS: Advanced degree in a scientific field, preferably related to biology or chemistry; minimum three years of laboratory research experience in a university or comparable environment and demonstrated experience in the management of laboratory safety/industrial hygiene programs; knowledge of health and safety regulations and their applicability within university settings; effective communication skills. Salary to \$63K/Yr. (depending on yrs. of applicable exp.).

TO APPLY: Please send resume and cover letter highlighting qualifications to: **Carol VonderLinden, #49709-SM, 101 Mitchell Bldg., Stanford University, Stanford, CA 94305-2210.** An equal opportunity employer through affirmative action.



Stanford University

GRADUATE OPPORTUNITIES In Space Biology



The DIVISION OF BIOLOGY at KANSAS STATE UNIVERSITY is offering an exciting opportunity for you in BIOSERVE SPACE TECHNOLOGIES, A NASA CENTER FOR THE COMMERCIAL DEVELOPMENT OF SPACE. Graduate assistantships, with an annual stipend of \$10,200, are being awarded to qualified students for studies that combine interests in SPACE with research careers in BIOLOGY.

Applications are invited for graduate studies in:

- virology & oncology
- microbiology & immunology
- cell & developmental biology
- molecular biology & genetics
- physiology & ecology

TAKING LIFE SCIENCES TO NEW HEIGHTS

For further information write:

**BIOSERVE SPACE TECHNOLOGIES
DIVISION OF BIOLOGY — ACKERT HALL
KANSAS STATE UNIVERSITY
MANHATTAN, KS 66506**

KSU is an equal opportunity/affirmative action employer.

POSITIONS OPEN

BIOCHEMIST/MOLECULAR IMMUNOLOGIST

The Department of Biochemistry and Biophysics at Iowa State University invites applications for a tenure-track position. Rank and salary will depend on qualifications. We seek an individual who is highly motivated toward research and shows evidence of a creative research program in molecular aspects of the immune system or other macromolecular recognition systems. Applicants must have a commitment to undergraduate and graduate teaching in general biochemistry/biophysics as well as molecular immunology. Generous start up funding and space in a new molecular biology building will be available. Send curriculum vitae, list of publications, two to three representative reprints, a statement of research interests, and three letters of recommendation to: **Dr. Jack Horowitz, Department of Biochemistry and Biophysics, Iowa State University, Ames, IA 50011** by 16 January 1989. *Iowa State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and other protected groups are encouraged to apply.*

BIOCHEMISTRY FACULTY POSITION IN MOLECULAR NEUROBIOLOGY UNIVERSITY OF WISCONSIN-MADISON

The Biochemistry Department, University of Wisconsin-Madison, invites applications for a position at the assistant, associate or full professor level. We are particularly interested in applications from individuals whose research emphasizes molecular neurobiology. Outstanding individuals in other areas of biochemistry will be considered. The successful candidate is expected to develop a vigorous, independent research program and to participate in the department's undergraduate and graduate teaching programs. Applications, including curriculum vitae, publication list, summary of past work and accomplishments, and a statement of future research plans, should be sent to: **Professor William S. Reznikoff, Chairman, Department of Biochemistry, University of Wisconsin-Madison, 420 Henry Mall, Madison, WI 53706**. In addition, applicants should arrange for three letters of reference to be mailed to the same address. To assure consideration, all application materials should be received by 1 January 1989. *The University is an Affirmative Action/Equal Opportunity Employer, and encourages applications from women and minorities.*

BIOCHEMIST UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE DEPARTMENT OF DERMATOLOGY

Department of Dermatology at the University of Cincinnati College of Medicine seeks Ph.D. as postdoctoral fellow/assistant professor for isolation of new cutaneous hormone. Candidate must be knowledgeable about HPLC and similar technologies for purification of prostaglandins and/or peptides; and with hormone mechanisms of action and regulation of cellular division. Position immediately available. Submit résumé to: **James J. Nordlund, M.D., U.C. College of Medicine, Department of Dermatology, 231 Bethesda Avenue, Mail Location #592, Cincinnati, OH 45267-0592**.

UC is an Equal Opportunity Employer.

LYNCHBURG COLLEGE IN VIRGINIA

Lynchburg College seeks modern **BIOLOGIST** to chair six-person department revising curriculum, improving instruction, and planning facilities renovation and addition. Seek individual who can teach microbiology, plus either physiology or cell biology. The position is tenure-track and requires the doctorate. Review of applications will begin in late November and continue until an appointment is made.

The College is a coeducational, liberal arts institution of over 2,400 students, affiliated with the Christian Church (Disciples of Christ), a liberal Protestant denomination. Lynchburg is a community of 150,000 persons located near the Blue Ridge Mountains, 3½ hours southwest of Washington, D.C. The city has a diversified economic base, excellent public schools, a mild climate, and many opportunities for recreation. Five colleges enhance its cultural life.

Lynchburg College strongly encourages applications from women and from members of minority groups. Please send credentials, including curriculum vitae and names of references to: Dr. Orrie O. Stenroos, Chair, Department of Biology, Lynchburg College, Lynchburg, VA 24501. Equal Opportunity Employer.

POSITIONS OPEN

BIOCHEMISTRY, SENIOR FACULTY POSITION. The Chemistry Department, Wayne State University, is seeking an outstanding individual whose research interests are in a contemporary biochemical area to fill a tenured full professor position. A candidate should have a strong record of attracting extramural funding, an excellent publication record and considerable stature in the field. An attractive, competitive package including excellent research and office space, and research support will be offered the successful candidate. *Women and members of minority groups are encouraged to apply.* The Department is housed in a modern research building and is very well equipped including core facilities for oligonucleotide synthesis and automated DNA sequencing, fermentation, high field NMR, mass spec, molecular modeling, and x-ray crystallography. Collaborative interactions with the adjacent Medical School faculty and the Detroit Medical Center are facile and convenient as are interactions with the Center for Molecular Biology, Center for Chemical Toxicology and the Comprehensive Cancer Center. Send curriculum vitae and other pertinent information to: **Dr. Richard L. Lintvedt, Chairman, Department of Chemistry, Wayne State University, Detroit, MI 48202.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY POSITION RHODES COLLEGE

The Department of Chemistry of Rhodes College invites applications for a tenure-track, assistant professor appointment in biochemistry for 1989 to 1990. The department currently has seven faculty members and is ACS certified. Candidates should possess a Ph.D. in biochemistry, a substantial background in organic chemistry, and a strong interest in undergraduate teaching and research.

Applicants should submit curriculum vitae, all undergraduate and graduate transcripts, a statement of research interests, and have three letters of recommendation sent by 6 January 1989 to:

**Dr. David Y. Jeter, Chairman
Department of Chemistry
Rhodes College
Memphis, TN 38112**

Rhodes College, a selective liberal arts and sciences college, has 1350 students and a student to faculty ratio of 12:1. The College enjoys close ties with both St. Jude Children's Research Hospital and the University of Tennessee, Memphis.

Rhodes College is an Affirmative Action/Equal Employment Opportunity Employer and encourages applications from minority and women candidates.

TWO BIOLOGY POSITIONS RHODES COLLEGE

The Biology Department of Rhodes College invites applications for two tenure-track positions, one in molecular biology and one in developmental biology. Developmental biology applicants whose research interests are in plant systems are especially encouraged; however, all qualified applicants will be considered. These positions will be filled at the assistant professor level and begin 15 August 1989. Teaching responsibilities for both positions will include one upper level course in the major area, involvement in the introductory biology series, and a non-majors course in the area of interest. Candidates must have a Ph.D., a strong interest in teaching at the undergraduate level, and a commitment to continuing research.

Applicants should submit curriculum vitae, transcripts, a statement of research interests and three letters of recommendation by 6 January 1989 to:

**Dr. John Olsen, Chairman
Department of Biology
Rhodes College
Memphis, TN 38112**

Rhodes College is a College of Liberal Arts and Sciences with 1350 students and a student:faculty ratio of 12:1. Located in a residential area of Memphis, Rhodes College and the Biology Department enjoy close ties with St. Jude Children's Research Hospital, Memphis State University, and the UT Memphis Medical School.

Rhodes College is an Affirmative Action/Equal Employment Opportunity Employer and encourages applications from minority and women candidates.

POSITIONS OPEN

BIOLOGY (BACTERIOLOGY/MICROBIOLOGY): Midwestern State University, Wichita Falls, Texas. **ASSISTANT PROFESSOR**, tenure-track position, Ph.D. required, beginning fall 1989. Teaching responsibilities will include: introductory courses in biology, microbiology, and immunology, and undergraduate and graduate courses in bacteriology. Development of a research program is expected. The successful candidate will be responsible for supervision of thesis research for masters students. A complete résumé and three or more letters of recommendation should be received by 10 February 1989. Address inquiries and materials to: **Dr. Norman Horner, Chairman, Search Committee, Department of Biology, Drawer A, Midwestern State University, Wichita Falls, TX 76308.**

An Equal Opportunity/Affirmative Action Employer.

BIOSCIENCES: AQUATIC ECOLOGY AND BOTANY. Two tenure-track positions, **ASSISTANT PROFESSOR** rank, August, 1989, starting date. The Ph.D., postdoctoral experience, and potential and evidence for extramural funding required. The successful candidate is expected to develop strong research activity and productivity, seek and secure extramural funding, and participate in recruiting and advising graduate students with primary focus on the doctoral program. Salary dependent upon qualifications and experience.

BOTANY: Preference given to candidates with research interests and training in experimental plant development, plant anatomy, or closely related areas in evolutionary and systematic biology which complement ongoing research programs. Teaching in freshman biology Honors Courses, plant anatomy/botany course alternate years, graduate specialty one semester, with some lectures in freshman biology majors course.

AQUATIC ECOLOGY: Research training and experience should be compatible with, and complementary to, on-going research programs in the Aquatic Ecology Center and/or the Water Resources Research Institute. Teaching alternates in general biology, upper-division ecology course, and graduate aquatic ecology specialty.

Submit letter of application, résumé, copies of recent major publications, and arrange for arrival of all transcripts and three letters of recommendation by the application deadline: 31 December 1988.

Submit applications to:

**Aquatic Ecology: Dr. Lowell P. Orr, Chair
Search Committee, Box 13**

**Botany: Dr. Gary Larkin, Chair
Search Committee, Box 25**

**Department of Biological Sciences
Kent State University
Kent, OH 44240**

BOTANY POSITION. To begin August 1989. Instructor/Laboratory Coordinator. Non-tenure appointment. Introductory biology, botany, plant taxonomy, ecology, and some administrative duties. Greenhouse. Study and/or experience at a liberal arts college preferred. Master's degree minimum. Agnes Scott is a 4-year liberal arts college for women in the Atlanta area. Send letter of application, curriculum vitae, transcripts, and names of three references to: **Dr. Sandra T. Bowden, Department of Biology, Agnes Scott College, Decatur, GA 30030.** Applications should be received by 5 December 1988.

CANCER PHARMACOLOGIST

A tenure-track position at the assistant professor level is open in the Pharmacology Section of the Division of Hematology-Oncology, Department of Pediatrics, University of Southern California at Childrens Hospital of Los Angeles. Candidates will also be considered for a joint appointment in a basic sciences department and membership in the USC-Norris Comprehensive Cancer Center. Excellent laboratory space is available on the pharmacology floor of our new research tower. Candidates should have a Ph.D. in pharmacology or biochemistry and postdoctoral training in cancer pharmacology or molecular biology related to potential anticancer drug therapy. Send curriculum vitae, representative publications, a statement of research interests and the names of three references to: **John Holcenberg, M.D., Division of Hematology-Oncology, Childrens Hospital of Los Angeles, PO Box 54700, Los Angeles, CA 90054-0700.** *An Equal Opportunity Employer.*

PROTEIN BIOCHEMIST -Biosensors-

SRI INTERNATIONAL, a contract research and development institute, located on the San Francisco Peninsula, is currently looking for a Protein Biochemist or Immunochemist to provide biochemical/immunochemical input and conduct laboratory work as part of a multi-disciplinary team developing novel biosensors based on antibody, antigen, or enzyme substrate reactions. Research will include design, synthesis, purification and characterization of labelled immunochemicals as part of biosensor development. Recent PhD in Biochemistry, Immunochemistry or closely related field. Experience with biosensor development desirable. Salary commensurate with experience.

Please send resume to R.S. Solomon, SRI INTERNATIONAL, 333 Ravenswood Ave., Menlo Park, CA 94025. An equal opportunity employer.



Post Doctoral Research at The Wistar Institute

Post doctoral positions are available at The Wistar Institute for candidates with a strong background in molecular and cell biology, virology, immunology, genetics or protein chemistry. Specific areas of research include: human retroviruses; DNA/RNA tumor viruses; growth factors; oncogenes; pattern formation in embryos; molecular mechanisms involved in the immune response; x-ray crystallography of virus receptor interaction; and aging in tissue culture. The Wistar Institute is an independent institution, located on the campus of the University of Pennsylvania and is equipped with the latest biotechnology facilities.

Starting salary at \$20,000 a year. A brochure describing specific project of staff investigators is available upon request. Interested applicants are requested to send a curriculum vitae and the names of 3 references to: **Coordinator of Research Training, THE WISTAR INSTITUTE, 36th and Spruce Streets, Philadelphia, PA 19104.** Equal opportunity employer, M/F.

THE
WISTAR
INSTITUTE



Search Extended for Director, University Office of Grant and Contract Administration

Yale University is extending its search for an individual to assume responsibility for directing the Office of Grant and Contract Administration in efforts that provide maximum support for researchers in the University community to explore opportunities for external support from non-profit sources.

Responsibilities involve developing personal relationships within governmental agencies and foundations and with Yale faculty members to establish an effective interface that will promote identification of where and with whom the greatest interest lies for the research in question and in providing support for it. On behalf of the Provost and the University, will authorize and transmit all proposals to the appropriate agencies and coordinate any action necessary with the Director of Corporate and Foundation Relations in the Development Office or other appropriate University staff.

The selected individual will also be accountable for the management of office staff in the entire process of proposal submission and negotiations to the receipt of an award including insuring compliance with University and grantor/contractor requirements and regulations, and inclusion of appropriate, accurate and complete financial information.

Requirements include a Doctoral degree or equivalent, preferably in natural sciences or engineering; and 3-5 years experience as a program officer in a federal research-supporting agency or as a university faculty member. Significant knowledge/experience in grant and contract administration within the academic sector is highly desirable.

Liberal fringe benefit program includes 1 month vacation, 13 holiday/recess days, comprehensive group health and life insurance, pension plan and tuition assistance.

Forward resume, salary history and salary requirements by Dec. 1, 1988 to: C.E. Parler, Yale University Department of Human Resources, 155 Whitney Ave., P.O. Box 1404, Yale Station, New Haven, CT 06520-1404.

Yale University is an affirmative action, equal opportunity employer.



Yale University

ASSOCIATE SCIENTISTS/ MOLECULAR BIOLOGISTS

As a leader in the industry of pharmaceuticals and medical research, opportunities at Hoffmann-La Roche offer exciting and innovative projects, a state-of-the art environment and unlimited growth potential.

We are currently seeking Associate Scientists to prepare recombinant retroviral structures to transfer oncogenes into normal cells; to generate malignant cells by insertional mutagenesis; and to generate recombinant soluble proteins expressed in bacteria. To qualify, you must have a background in molecular biology. Experience with most areas of recombinant DNA technology including construction of recombinant retrovirus vehicles, DNA sequencing or Northern and Southern hybridization analysis is desirable. In addition, a BS and 3+ years of relevant experience are essential.

In return, we offer a very comprehensive compensation package. For confidential consideration, please send your resume with salary history/requirements (those without this information will not be acknowledged), to: **Betty DeVos, Human Resources, Staffing and Employee Services, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For A Healthier Tomorrow.

POSITIONS OPEN

CELL/DEVELOPMENTAL BIOLOGY

The Department of Biology invites applications for a tenure-track position at the rank of **ASSISTANT PROFESSOR**, beginning August, 1989. Applicants having research experience in pattern formation, plant development, or extracurricular matrix are especially urged to apply. Qualifications: Ph.D. required and postdoctoral experience preferable. Responsibilities: teach undergraduate and graduate courses, establish an externally funded research program, train M.S. students, and assist in program development, student advising and university service. Position is subject to final budgetary approval. Send curriculum vitae, reprints of representative papers, and three letters (sent directly by references) to: **Dr. David C. Culver, Department of Biology, The American University, 4400 Massachusetts Avenue, NW, Washington, DC 20016**. Deadline: 15 December 1988. *Equal Employment Opportunity/Affirmative Action University: minority and women candidates are encouraged to apply.*

CHAIR, Department of Biology and Health Sciences, College of Engineering and Science, University of Detroit. Applications are invited from faculty in the area of developmental biology or a closely related field. The successful candidate will be expected to participate in undergraduate and master's-level instruction, while carrying on research interests at a level in keeping with the other academic and administrative involvements. Applicants should submit a résumé, including teaching and research experience, and the names of three references, to be received by 15 December 1988, to: **Dr. R. G. Albright, Department of Biology and Health Sciences, University of Detroit, 4001 West McNichols, Detroit, MI 48221**. An *Equal Opportunity/Affirmative Action Employer*.

CHAIR, DEPARTMENT OF ANATOMY

Morehouse School of Medicine (MSM) invites applications for the position of Professor and Chair of the Department of Anatomy to begin 1 July 1989. The candidate should be a well-established investigator in a current field of research who has demonstrated a strong commitment to teaching medical students. The applicant should also have demonstrated academic administration capabilities. Applicants must have the Ph.D. or M.D./Ph.D. degree.

MSM is an expanding, new, private medical school with a strong commitment to the academic and scientific growth of minority students. The position offers an excellent opportunity to develop an outstanding, progressive department in an institutionally supported atmosphere of cooperative growth and development.

Initial screening of candidates will begin 1 December 1988. Applications or letters of interest along with curriculum vitae, including research, teaching, and administrative experience should be sent to: **Collins Baber, M.D., Chair, Search Committee for the Chairperson of Department of Anatomy, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, GA 30335**.

COGNITIVE SCIENTIST

The Department of Psychology of the University of Minnesota is seeking applications for a tenure-track position in cognitive science, at the assistant professor level. The applicant should have a Ph.D. and demonstrated competence in both computational modeling and empirical research. The individual should be qualified to teach graduate and undergraduate courses in cognitive science and would be expected upon hiring to initiate an active research program. Preferred specialization is in the area of computational vision, particularly in the interface between lower and higher-level vision but candidates with strong research credentials in other areas of cognitive science are also encouraged to apply. This is a faculty position, 100% time appointment during the academic year, with the initial appointment to begin 16 September 1988. Salary is competitive and will depend on the candidate's qualifications and experience. *The University of Minnesota is an Equal Opportunity Employer and Educator and specifically invites and encourages applications from women and minorities.* Candidates should submit curriculum vitae, at least three letters of reference, recent publications, and a statement of long-term research interest to: **Cognitive Science Search Committee, Psychology Department, University of Minnesota, 75 East River Road, Minneapolis, MN 55455**.

Application deadline: 1 December 1988.

POSITIONS OPEN

SCOTLAND UNIVERSITY OF EDINBURGH FACULTY OF SCIENCE BUCHANAN CHAIR OF GENETICS

Applications are invited for the Buchanan Chair of Genetics. The holder of the Buchanan Chair of Genetics will be expected to provide academic leadership in this large and diverse department, to participate in the teaching programme of the department and to promote and undertake research. The salary will be within the professional range.

Further particulars may be obtained from: **The Secretary to the University, University of Edinburgh, 63 South Bridge, Edinburgh, EH1 1LS**, to whom applications (twelve copies) including curriculum vitae and the names and addresses of three referees, should be lodged not later than 30 November 1988. Overseas candidates need submit only one copy of the application. Please quote reference no. 57/88.

UNIVERSITY OF TORONTO CHAIR, DEPARTMENT OF BIOCHEMISTRY

Applications are now being accepted for the position of Professor and Chair of the Department of Biochemistry, Faculty of Medicine, University of Toronto. The University's goal is to attain the highest criteria of academic accomplishment and recognized international standing. A current high priority for the Department is protein structure and function. Candidates should have an M.D. or Ph.D. degree with an established record of high achievement in research in this discipline, as well as proven administrative skills. Duties are to provide innovative exemplary academic leadership in research and teaching, and to be responsible for overall administration of a large Department. Salary to be negotiated. *The University of Toronto encourages both men and women to apply for positions. This position is to be filled by 1 July 1989.*

Applications should be sent to: **Dr. John H. Dirks, Dean, Faculty of Medicine, University of Toronto, room 2109, Medical Sciences Building, Toronto, Ontario, M5S 1A8**. Applications should be submitted before 31 January 1989.

In accordance with Canadian immigration regulations, priority will be given to Canadian citizens and permanent residents.

CHAIRMAN, DEPARTMENT OF PSYCHIATRY AND HEALTH BEHAVIOR—The School of Medicine, Medical College of Georgia, is seeking a Chairman for the Department of Psychiatry and Health Behavior. The department has a strong research orientation with 120 faculty, 60 residents and fellows, and 9 affiliated facilities. It is currently undergoing building and faculty expansion. Candidates must have demonstrated skills in research, teaching, patient care, and administration. Deadline for applications is 15 January 1989. Please send nominations and inquiries to: **Don W. King, M.D., Chairman, Psychiatry Search Committee, Department of Neurology, Medical College of Georgia, Augusta, GA 30912**. *Equal Opportunity Employer/Affirmative Action Participant.*

DIRECTOR COASTAL FISHERIES INSTITUTE LOUISIANA STATE UNIVERSITY

The Coastal Fisheries Institute (CFI) of Louisiana State University's Center for Wetland Resources is seeking applicants for the position of Director. Established in 1982, the CFI conducts fundamental and applied research relevant to marine fisheries of the northern Gulf of Mexico. Its multidisciplinary staff has grown to nine Ph.D.'s, one J.D., and fifteen research associates and includes fisheries scientists with various interest fields, a marine economist and a fisheries attorney. Ph.D. in fisheries, marine sciences or related area is required. The Director's position will be at the full or associate professor level and tenurable through the Department of Marine Sciences. Although final hiring approval is pending, a hiring date of 15 August 1989 is anticipated. Salary is commensurate with qualifications and experience. Applicants should send curriculum vitae, names, addresses, and telephone numbers of at least three references; and a statement of research goals to: **Dean, Center for Wetland Resources, Louisiana State University, Baton Rouge, LA 70803-7503**. Applications will be accepted until 15 January 1989 or until a suitable candidate pool is established. *LSU is an Equal Opportunity Employer.*

POSITIONS OPEN

COMPARATIVE PHYSIOLOGIST. Assistant professor, 9-month tenure-track. Ph.D. in biological sciences required; emphasis in comparative endocrinology, neuroendocrinology preferred. Postdoctoral experience preferred. Responsibilities include participation in teaching undergraduate courses in human anatomy and physiology, development of a graduate course in comparative endocrinology, and development of graduate student and extramurally funded research programs. Please submit curriculum vitae, transcripts, reprints of recent publications, evidence of teaching performance, a summary of teaching and research interests, and three to five letters of recommendation to: **Dr. John Pritchett, Professor and Head, Department of Zoology and Wildlife Science, Auburn University, AL 36849-5414**. Telephone: 205-826-4850. Applications will be accepted until 15 January 1989.

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

DEPARTMENTAL DIRECTOR CENTER FOR WATER AND THE ENVIRONMENT NATURAL RESOURCES RESEARCH INSTITUTE UNIVERSITY OF MINNESOTA, DULUTH

The position of Director, Center for Water and the Environment, is a 12-month professional/administrative appointment. Appointment to a tenured associate professor or professor rank in the College of Science and Engineering may be considered for an individual with appropriate academic background and accomplishments.

The Center: The mission of the Center for Water and the Environment (CWE) is to conduct basic and applied research that will contribute to a sustained and environmentally sound utilization of Minnesota's natural resources. The CWE is a part of the Natural Resources Research Institute which also includes Centers for Economic Development and Applied Research and Technology Development.

Responsibilities: The Director manages a growing staff of approximately forty which includes nine Ph.D. scientists, and manages an internal base budget as well as significant extramural funds. Interaction with private industry, academia and government agencies at all levels is important in the mission of the Center. Internally, the Director works closely with an Associate Director and Program Coordinator within CWE, and with the Directors of the other Centers and the Institute Director.

Minimum director qualifications: Ph.D. in an appropriate biological, physical or engineering science discipline and 3 years of experience in research administration. Demonstrated evidence of effective communication skills is required.

Desired director qualifications: Ph.D. in an appropriate biological, physical or engineering science discipline, with demonstrated leadership in ecological or natural resources research; 5 to 10 years of executive management, administrative experience in an industrial or academic technical research facility and demonstrated experience in the generation of external grants and contracts.

Minimum tenured associate professor qualifications: Ph.D. plus 5 years of professional experience. Professionally distinguished research and writing. Demonstrated evidence of effective teaching, advising and communication skills appropriate to a faculty position is required.

Minimum tenured professor qualifications: Ph.D. plus 8 to 10 years of professional experience. National reputation in research and demonstrated effectiveness in teaching, advising and communication skills appropriate to a faculty position is required.

Salary: Competitive. Starting date: 1 May 1989 or as soon thereafter as possible. Applications must be postmarked by 31 December 1988. To apply, send an application letter, current résumé and the names, addresses, and telephone numbers of five references to:

**Director Search Committee
Center for Water and the Environment
Natural Resources Research Institute
University of Minnesota, Duluth
3151 Miller Trunk Highway
Duluth, MN 55811
Telephone: 218-720-4298**

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

PROGRAM OF EXCELLENCE IN MOLECULAR BIOLOGY

New Investigator Positions

The National Heart, Lung and Blood Institute of the NIH has awarded the University of Cincinnati Medical Center a "Program of Excellence in Molecular Biology." The goals of the University of Cincinnati Program are to provide skills development and research opportunities in the molecular biology of heart and lung. Specifically, the Program will concentrate on gene regulation and structure-function analysis of proteins which play a central role in heart and lung. In addition, the role these genes play in human health will be investigated. The skills development program includes a 5 year program, initiating at the postdoctoral level and progressing to junior faculty status in the final years. New Investigators will initially work closely with the sponsor but in the final year will develop a research problem separate from that of the sponsor, and apply for independent funding to enable the Investigator to move to another institution if desired.

We are presently recruiting 12 such individuals with an additional twelve to be added in the second year. Ph.D.s or M.D.s with a strong background in molecular genetics who wish to apply their skills to significant problems of heart and lung or individuals with strong backgrounds in heart and lung who wish to develop molecular genetic tools for continued study of these problems are encouraged to apply. We are particularly interested in recruiting minorities to the Program. Stipends are competitive, beginning at \$25,000 per year and moving to \$37,000 in final years. The core faculty are:

1. Jerry Lingrel, Ph.D. -Regulation of the Na,K-ATPase genes and RFLP analysis of diseases such as familial hypertension. Identification of the cardiac glycoside binding site using site specific mutagenesis.
2. Jeffrey Whitsett, M.D. -Characterization of lung surfactant proteins and genes.
3. Winston Kao, Ph.D. -Collagen gene expression in the lung.
4. Gary Shull, Ph.D. -Structure-function relationships and genetic regulation of Ca-transporting ATPases of intracellular and plasma membranes.
5. Jeffrey Robbins, Ph.D. -Study of cardiac contractile proteins and growth and developmental control of muscle and pulmonary proteins.
6. Donald Luse, Ph.D. -Transcriptional analysis of lung surfactant protein gene promoters.
7. Steven Potter, Ph.D. -Insertional mutagenesis for identifying critical genes in heart and lung development.
8. Arnold Schwartz, Ph.D. -Structure and function of Ca^{++} channel proteins and gene regulation; isolation of receptors for calcium antagonists.
9. Judith Harmony, Ph.D. -Proteins and genes involved in neutral lipid transfer; the regulation of cell proliferation and differentiation by apolipoproteins.
10. Thomas Doetschman, Ph.D. -Gene targeting in ES cells using homologous recombination. Focus will be on vasculogenesis, angiogenesis and cardiogenesis.

Applicants should submit a C.V. and the names of three references to Jerry B. Lingrel, Ph.D., Director, Program of Excellence in Molecular Biology, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, Ohio 45267-0524.

Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

DIRECTOR MARY BABB RANDOLPH CANCER CENTER WEST VIRGINIA UNIVERSITY

Applications and nominations for the position of Director of the Mary Babb Randolph Cancer Center at West Virginia University are invited. The Cancer Center, which is currently under construction, will have 43,000 net square feet of space immediately adjacent to the new Ruby Memorial Hospital. West Virginia University is committed to developing a center devoted to excellence in multidisciplinary cancer research, education, and patient care. Both state and federal funding is committed to meet the Cancer Center's goals.

The Director must be a widely recognized scientific leader in the mainstream of cancer research, care and education. The Director must have proven ability in scientific program planning and administration, and be able to interact effectively with faculty from all segments of the University, health care practitioners, state agencies, elected public officials, and the public. The Director will have responsibility for and authority over all cancer center personnel, facilities, core services, equipment and budgets, and reports directly to the Dean of School of Medicine on academic program matters. Please forward curriculum vitae and three references by 1 January 1989 to:

Stephen Wetmore, M.D.
Chairman, Department of Otolaryngology
Chairman, Cancer Center Search Committee
West Virginia University
Morgantown, WV 26506

West Virginia University is an Equal Opportunity Employer

DIRECTOR OF RESEARCH—The Marie Selby Botanical Gardens. Responsibilities: Coordinate and manage the Gardens' program of research, edit the Gardens' research journal (*Selbyana*), and conduct own research program. Qualifications: strong interest and background in tropical botany, including doctoral degree, research publications and tropical field experience. To apply: Send curriculum vitae, with references to: **The Executive Director, Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota FL 34236.**

ECOLOGY/POPULATION BIOLOGY. Applications are sought for two **TENURE-TRACK POSITIONS**, the first in plant population biology and the second in either plant physiological ecology or terrestrial ecosystem ecology. Successful candidates will be expected to establish outstanding teaching and research programs. Each will share in the teaching of an introductory course in ecology or evolution, and offer an advanced undergraduate course in alternate years. Both individuals will be encouraged, in addition, to offer a graduate-level course or seminar in their area of specialization.

It is expected that both positions will be filled at the rank of assistant professor, though an exceptional candidate with appropriate experience for one of the two positions may be considered for appointment at a higher level.

The positions will be available in September 1989. We will start reviewing applications after 31 December 1988. Applicants should send curriculum vitae, copies of representative publications, a statement of teaching interests and experience, and a description of research plans. They should also make arrangements to have three letters of recommendation sent to: **Dr. Paul Feeny, Chairman, Section of Ecology and Systematics, Division of Biological Sciences, E145 Corson Hall, Cornell University, Ithaca, NY 14853-2701.**

*Cornell University is an Affirmative Action/
Equal Opportunity Employer.*

The Department of Ophthalmology, Washington University School of Medicine (St. Louis) has a position for an **ELECTROPHYSIOLOGIST OR CELL BIOLOGIST** with an interest in the retina. We will consider either applicants who have recently completed postdoctoral training or applicants at more senior levels. Applicants should send curriculum vitae, and the names and addresses of three references to: **Adolph I. Cohen, Ph.D., Ophthalmology Department, Box 8096, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** *Washington University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR OF TECHNICAL SERVICES to direct and maintain a functional diagnostic laboratory equipped to perform serology (ELISA, plate agglutination tests), bacteriology (aerobic isolation, identification and antibiotic sensitivity) and complicated bacterial and viral techniques. Deliver technical lectures, present special training programs for clients and represent the company in scientific and technical meeting. Require Ph.D. in medical microbiology with 2 years of experience or additional postgraduate education in veterinary medicine may be substituted for equivalent years of experience. 25% travel to South America and fluency in Spanish requested. Forty hours per week. 7:45 a.m. to 4:30 p.m. Salary: \$4,000 per month. Apply at: **The Texas Employment Commission, Nacogdoches, Texas** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. # 5424955.** *Ad paid by an Equal Employment Opportunity Employer.*

EMINENT SCHOLAR IN PROTEIN ENGINEERING THE OHIO STATE UNIVERSITY

The Department of Biochemistry at The Ohio State University invites applications and nominations of distinguished individuals for an Eminent Scholar faculty position at the rank of professor. We seek an exceptional individual who has an outstanding record and an imaginative and highly productive research program in the area of protein engineering. The Eminent Scholar position is an Endowed Chair and the successful candidate will command a highly competitive salary, a modern, spacious laboratory, with adjacent specialized rooms, generous set up funds, and a recurring annual budget for personnel, supplies, and equipment. The primary responsibility of the Eminent Scholar is to direct a research program in protein engineering and to participate in some teaching in this area. The Eminent Scholar will also play a leadership role in determining future directions of Biochemistry at Ohio State. Individuals may be nominated or may themselves apply for this position. Please submit a résumé and a concise statement of research interests to: **Dr. George Marzluf, Eminent Scholar Search Committee, Department of Biochemistry, Ohio State University, 484 West 12th Avenue, Columbus OH 43210.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Pathology and Laboratory Medicine is interested in recruiting **FACULTY** with strong commitment to basic research in the biology of mineralized tissue. In addition to research, this individual will be responsible for diagnostic activity of biopsies of non-neoplastic bone diseases. Preference will be given to an individual with formal training and Board Certification in anatomic pathology. This is a tenure-track position, candidates must be eligible for medical licensure in the State of Pennsylvania.

The University of Pennsylvania is an Equal Opportunity Employer.

Send curriculum vitae and names of three references to:
**Giuseppe G. Pietra, M.D.
Director, Division of Anatomic Pathology
Department of Pathology and Laboratory Medicine
Hospital of the University of Pennsylvania
3400 Spruce Street
Philadelphia, PA 19104-6082**

FACULTY OPENING IN PHYSICS (STATISTICAL PHYSICS—THEORY) UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Physics at the University of California at Berkeley expects to make one appointment in statistical physics (theory) at the assistant, the tenured associate, or the full professor level, effective 1 July 1989, and pending budgetary approval. There is a possibility of an additional future appointment in this field. All subareas of application of modern statistical methods, including condensed matter, particle physics, and nonlinear dynamics will be considered.

Please send curriculum vitae, bibliography, statement of research interests, and list of references to **Professor P. Buford Price, Chairman, Physics Department, University of California, Berkeley, CA 94720**, before 15 February 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ENDOCRINE ASSAY LABORATORY MANAGER: Position available immediately for experienced endocrine technician (B.S./M.S.) with management experience. Located in rural Piedmont of Blue Ridge Mountains. Duties include personnel supervision, budgetary management, development/application of technology and quality control. Experience with immunoassay, radiiodination, steroid technology, ligand binding assays, and bioassays desirable. Contact: **Dr. Don Koritnik, Department of Comparative Medicine, Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

ENVIRONMENTAL HEALTH

The Program in Social Ecology at the University of California, Irvine, is recruiting for an **ASSISTANT PROFESSOR**, tenure-track, position in the area of environmental health. Ph.D. in environmental sciences, organic chemistry, molecular genetics, or biochemistry is preferred with experience in laboratory of field research related to environmental health sciences. Ability to teach statistics and environmental testing methodology is desirable. Please send cover letter, curriculum vitae, and names of three referees to: **Dr. Betty H. Olson, Environmental Health Search Committee, Program in Social Ecology, University of California, Irvine, CA 92717**, by 15 January 1989. *UC is an Equal Opportunity Employer/Affirmative Action Employer.*

EVOLUTIONARY BIOLOGIST

The Department of Biology at the University of Houston seeks to fill tenure-track positions at the assistant or associate professor level within the Evolutionary Biology Program. Successful candidates are expected to develop nationally competitive research and graduate training programs. We are especially interested in the area of molecular evolution but actively solicit a wider range of candidate expertise to complement existing faculty within the Program. Send curriculum vitae, brief statement of research interests, and names of at least three references by 15 December 1988 to: **Edwin H. Bryant, Evolutionary Biology Search Committee, Department of Biology, University of Houston, Houston, TX 77204-5513.**

An Affirmative Action/Equal Opportunity Employer

FACULTY OPENING IN PHYSICS UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Physics at the University of California at Berkeley expects to make an appointment at the assistant, tenured associate, or full professor level, effective 1 July 1989, and pending budgetary approval. We encourage applications from both experimentalists and theorists in condensed matter physics, (including low-temperature physics), astrophysics and space physics, particle physics, atomic physics, and newly emerging subfields of physics.

Please send curriculum vitae, bibliography, statement of research interests, and list of references to **Professor P. Buford Price, Chairman, Physics Department, University of California, Berkeley, CA 94720**, before 15 February 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—BIOCHEMISTRY CARLETON COLLEGE

The Department of Biology of Carleton College invites applications for a 1-year faculty leave replacement. Teaching responsibilities will include biochemistry and associated laboratory, cell/molecular physiology, a seminar in the candidates research specialty and participation in a team taught introductory course. A Ph.D. is required and the appointment will be at the assistant professor level. *Women and minorities are especially encouraged to apply.* Carleton College is an undergraduate institution dedicated to excellence in teaching. The position begins on 1 September 1989. Interested candidates should send curriculum vitae, graduate transcripts, and three letters of recommendation by 15 January 1989 to: **Dr. John Tymoczko, Department of Biology, Carleton College, Northfield, MN 55057-4025.**

Carleton College is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

The Dept. of Anatomy, Temple University School of Medicine, has a tenure track position available at the Assistant Professor level with an anticipated starting date of July 1, 1989.

The successful candidate will be expected to establish and support an active research program using modern approaches to study contemporary biological issues, and to participate initially in teaching histology to medical students. Although no specific research experience is required, research strengths in the Department include cell, developmental, reproductive, radiation, bone and neurobiology. Applicants should have a PhD or MD degree, teaching experience in the anatomical sciences, post doctoral training, and a continuous record of research accomplishments. Persons interested in applying for the position, should send a detailed curriculum vitae, which includes a statement of research plans and the extent of exposure to Anatomical Sciences, and the names and addresses of three references by **December 15, 1988** to **Dr. Mark M. Black, Chairperson, Recruitment Committee, Dept. of Anatomy, Temple University School of Medicine, 3400 N. Broad St., Phila., PA 19140.**



Temple is an affirmative action, equal opportunity employer.



Tissue Culture Scientists

CIBA-GEIGY's Agricultural Division has excellent opportunities for multi-faceted scientists in our genetic engineering and crop improvement program. Long recognized as one of the world's foremost producers of crop protection chemicals, we have made a major commitment to expanded biotechnology research at our new facility in Research Triangle Park, NC.

The scientists we seek will assist in the development and engineering of plants using a variety of techniques such as callus, suspension and protoplast cultures, as well as plant regeneration and transformation.

A BS or MS in plant science or a related field is required, as is 2-5 years of lab experience. Preference will be given to candidates with experience in one or more of the following areas:

- Microinjection
- Cereal tissue culture
- Protoplast culture and transformation

You will find that CIBA-GEIGY offers exceptional career support and advancement opportunities, as well as a competitive salary and generous company-paid benefits. Please forward your resume, including three letters of professional reference, in confidence, to: **CIBA-GEIGY Corporation, Agricultural Division, Dr. Mary-Dell Chilton, P.O. Box 12257, Research Triangle Park, NC 27709.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

Request For Applications

Cystic Fibrosis Research Grants for

NIH-APPROVED

BUT

UNFUNDED APPLICATIONS

The Cystic Fibrosis Foundation (CFF) announces the availability of funding for highly meritorious applications that have been submitted to and approved by the National Institutes of Health (NIH) but remain unfunded.

This new CFF research grant offers support for outstanding CF-related research projects until NIH or other agency funding can be obtained. The program recognizes the need for support of excellent projects that fall below the NIH's cut-off scores but that may contribute to the understanding of cystic fibrosis.

Applications must meet the following criteria:

- The project must have been reviewed by an NIH study section and presented to an institute council within 12 months of application to this program;
- The application must fall within the 50th percentile, with a maximum scientific score of 250;
- The application must be clearly relevant to cystic fibrosis;
- The applicant must not have received other funding for this work.

A maximum of \$75,000 in annual support will be available for up to two years. Support will be terminated upon award of funds from the NIH or other agency.

Applications are being accepted on a continuing basis. Investigators are encouraged to contact the Foundation to discuss the potential relevance of their work. For more information, contact **Robert J. Beall, Ph.D., Executive Vice President for Medical Affairs**, at the:



6931 Arlington Road
Bethesda, MD 20814
(301) 951-4422

POSITIONS OPEN

FACULTY POSITION AT THE MOLECULAR BIOLOGY INSTITUTE UNIVERSITY OF CALIFORNIA, LOS ANGELES

A tenure-track position is available at the assistant professor level for a molecular biologist who uses structural, biochemical, and/or molecular genetic approaches to study fundamental problems in biology. The individual will have the opportunity to interact with and complement existing groups in macromolecular structure and function, cell and developmental biology, and neurobiology. Please send résumé, a statement of research and teaching interests, and three letters of reference by 15 December 1988 to:

**Molecular Biology Search Committee
Molecular Biology Institute
UCLA
405 Hilgard Avenue
Los Angeles, CA 90024-1570**

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

FACULTY POSITION IN BIOLOGY: Applications are invited for a tenure-track position, assistant professor rank, beginning August 1989. Primary responsibility will be to teach Investigative Biology to majors and non-majors. Applicants must have the Ph.D. degree and strong training and teaching/research interests related to experimental methodology. Evidence of effective teaching ability must be presented. Submit curriculum vitae with names and addresses of three references by 15 January 1989 to: **Dr. Luckett V. Davis, Chair, Biology Department, Winthrop College, Rock Hill, SC 29733.** Winthrop is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN BIOMECHANICS/NEUROSCIENCE

Twelve-month, tenure-track appointment. Responsibilities include baccalaureate and graduate level teaching, research and service. Opportunity to interact with bioengineering and conduct research in laboratory equipped for measurement in EMG, torque, motion, and ground reactions; analyses via computer and on-line imaging system. Minimum requirements are 3 years of clinical experience, licensure or eligibility in Kentucky, and a Ph.D. Opportunity to work clinically, in Outpatient University Hospital rehabilitation center. Applications will be accepted until position is filled. Send letter of application, curriculum vitae, and names of three references to:

**Deane P. Currier, P.T., Ph.D.
Division of Physical Therapy
Department of Clinical Sciences
University of Kentucky
Medical Center
Annex I, Room 4
Lexington, KY 40536-0079**
Equal Opportunity Employer.

FACULTY POSITIONS MOLECULAR BIOLOGY, BIOCHEMISTRY, CELL BIOLOGY

The Department of Dermatology at Case Western Reserve University and University Hospitals of Cleveland has established the Skin Diseases Research Center of Northeast Ohio. To build a leading center for research and education in skin diseases, we are planning a major expansion of our research programs by recruiting new investigators and expanding our facilities. It is hoped that individuals will obtain joint appointments in basic science departments as part of the Center's interdisciplinary approach to biomedical research.

Several junior and senior tenure-track faculty positions are available for Ph.D. or M.D. candidates with strong biomedical research programs in molecular biology, biochemistry and/or cell biology as applied to the skin. Special expertise in protein structure/function, immunodermatology, photobiology and carcinogenesis is desirable.

Submit curriculum vitae, statement of research interests, names of three references and selected reprints to: **David R. Bickers, M.D., Director, Skin Diseases Research Center, Case Western Reserve University, 2074 Abington Road, Cleveland, OH 44106.**

CWRU is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION IN BIOCHEMISTRY.

The Chemistry Department, Wayne State University, is seeking to fill a tenure-track position in biochemistry at the assistant professor level. Candidates will be expected to establish an active research program in an area that complements the existing faculty and to teach in the departmental curriculum. *Women and minority candidates are especially urged to apply.* The department is very well equipped with core facilities for oligonucleotide synthesis and automated DNA sequencing, fermentation, high field NMR, mass spectrometry, x-ray crystallography, and molecular modeling. The chemistry faculty participate in the University Centers for Molecular Biology, Chemical Toxicology, and the Comprehensive Cancer Center. Applicants must have a Ph.D. and postdoctoral experience is strongly preferred. Send curriculum vitae, research summary, and three letters of recommendation to: **Dr. Richard L. Lintvedt, Chairman, Department of Chemistry, Wayne State University, Detroit, MI 48202.** Wayne State University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN THEORETICAL CHEMISTRY AT IOWA STATE UNIVERSITY

Applications and nominations of candidates are invited for a faculty position in any area of theoretical chemistry to begin after 1 July 1989. Any appointment will probably be at the level of assistant professor, although an advanced-level appointment might be possible for an outstanding person with suitable experience and credentials. The position requires demonstrated aptitude for creative research and for teaching, and a commitment to excel in both. Applications should be directed to: **Physical Chemistry Search Committee, c/o Professor D. K. Hoffman, Chairman, Department of Chemistry, Iowa State University, Ames, IA 50011.** Applicants should submit curriculum vitae, transcripts, and a brief outline of their research plans during the initial stages of their independent scientific careers. Applicants for assistant professor should arrange for three references to send letters directly to **Professor Hoffman.** Screening of applications will begin in November 1988. *Women and minority applicants are encouraged to apply.* Iowa State University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS. Union College Department of Biology invites applications for the following tenure-track positions: **MOLECULAR OR DEVELOPMENTAL GENETICIST** to teach in a general genetics course and one or more upper-level courses. **PHYSIOLOGIST OR NEUROBIOLOGIST** to teach animal physiology and at least one other advanced course. Union College is a small selective undergraduate institution with particular strength in science and engineering. The diverse Biology Department has thirteen full-time faculty. Candidates must have a strong commitment to both teaching and research. A Ph.D. is required and postdoctoral and teaching experience is desirable. Funding for research is provided in part by the College and several outside grants, including a major grant from the Hughes Foundation which will provide the successful applicants with funds for major equipment and, in their first year, a summer research salary and a reduced teaching load. Send your application and the names of three references by 20 January 1989 to: **Dr. John Boyer (for geneticist) or Dr. Robert Olberg (for physiologist), Department of Biological Sciences, Union College, Schenectady, NY 12308.** Union College is an Affirmative Action/Equal Opportunity Employer.

BIOORGANIC/BIOCHEMISTRY ASSISTANT PROFESSOR. The Department of Chemistry at Union College invites applications for a tenure-track position to begin fall 1989-1990. This position, which is partially funded by a Hughes Foundation grant, will involve an initial reduction in teaching load and include some support for research. The candidate is expected to have a Ph.D. and a strong organic background. Preference will be given to those with postdoctoral experience. Applicants should have the potential for excellence in undergraduate teaching and research. Applications must include curriculum vitae, undergraduate and graduate transcripts, an outline of research interests (and needs) and three letters of recommendation. All material should be sent to: **Dr. T. C. Werner, Chair, Department of Chemistry, Union College, Schenectady, NY 12308** by 1 January 1989. Union College is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR BIOLOGY MILLERSVILLE UNIVERSITY

The Biology Department invites applications for a tenure-track position starting August, 1989. Principal responsibility will include teaching molecular biology and cellular and molecular techniques. In addition, the applicant should be able to teach cell biology and general biology as the need arises. Appointment anticipated at rank of assistant professor, but rank and salary are dependent upon qualifications. An earned doctorate as well as demonstrated competence in teaching and research is required. Millersville University, located near Lancaster, Pennsylvania, has 7000 students including 500 biology majors. The successful candidate will work with 20 colleagues in a department that offers a variety of baccalaureate and master level programs. Send curriculum vitae, copies of transcripts, three current letters of recommendation, and evidence of teaching and research effectiveness to: **Dr. C. E. Hepfer, Chair, Molecular Biology Search Committee, Department of Biology, SC 11-11, Millersville University, Millersville, PA 17551.** Review of applications will begin 1 December 1988, and continue until the position is filled. Millersville University is an Equal Opportunity/Affirmative Action Employer.

DARTMOUTH COLLEGE FACULTY POSITIONS

Thayer School of Engineering is expanding and is seeking new faculty in the following areas: Electro-optics, materials science/solid state physics, mechanical engineering (solid mechanics), image processing, geosciences (groundwater or computational fluid dynamics), manufacturing (senior level endowed chair), and computer engineering (senior level endowed chair). For more information or to apply (submit résumé and names of three references), write to: **Dr. Carol B. Muller, Assistant Dean, Thayer School of Engineering, Dartmouth College, Hanover, NH 03755.** Review of applications will begin 15 November 1988.

Dartmouth College is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minority groups.

MAYO CLINIC FACULTY POSITIONS IN CANCER RESEARCH

The Department of Oncology invites applications for two faculty members open at any rank. Candidates with expertise in cell molecular biology, biophysics, or immunopathology interested in working in a multidisciplinary program directed toward the molecular characterization, detection, and control of human cancers. Joint appointments in other departments as appropriate. Please send curriculum vitae and names and addresses of three references to: **Dr. Matthew M. Ames, Oncology Search Committee, Department of Oncology, Mayo Clinic, Guggenheim 4, Rochester, MN 55905.** An Equal Opportunity/Affirmative Action Institution.

FIELD BIOLOGY (two temporary positions)—Middlebury College. One-year leave replacements in Ecology and in Vertebrate Biology for **INSTRUCTORS OR BEGINNING ASSISTANT PROFESSORS.** The ecologist will be responsible for an introductory lecture/laboratory course in general ecology required of majors, an advanced laboratory or field course in ecology and an advanced seminar of her or his own choosing. The field biologist will be responsible for an intermediate lecture/laboratory course in vertebrate biology, an advanced vertebrate field course and an advanced seminar. Either candidate might offer an introductory course in population genetics and evolution, in lieu of the advanced seminar. Successful candidates will also be active in research and committed to excellence in undergraduate biology education. Ph.D. or ADB required. Both positions are available 1 September 1989. Completed applications, including current curriculum vitae, statement of teaching and research interests and goals, all undergraduate and graduate transcripts, and three recommendations must be postmarked by 5 December 1988. The application and separate letters of recommendation should be sent directly to: **Dr. C. D. Watters, Chair, Department of Biology, Middlebury College, Middlebury, VT 05753.** Telephone: 802-388-3711, extension 5433. An Equal Opportunity Employer.

FACULTY POSITIONS IN IMMUNOLOGY

Duke University Medical Center

The Department of Microbiology and Immunology seeks to recruit two new faculty members to tenure-track opportunities in its Division of Immunology. One appointment is expected to be at the level of Associate Professor. Applicants for this position are expected to have established, productive research programs, with demonstrated excellence in their field of specialization. A second appointment is expected to be at the level of Assistant Professor. Applicants suitably qualified for this position will be well-trained and productive junior investigators, with the creative potential to develop a strong, independent research program. The research interests of the new appointees may be in any area at the forefront of modern immunological research. Applications should include a curriculum vitae, a summary of current research activities and future plans, and the names of three individuals from whom letters of recommendation can be solicited.

Applications should be sent to:

Dr. W. K. Joklik, Chairman
Department of Microbiology and Immunology
Box 3020, Duke University Medical Center
Durham, NC 27710

*Duke University is an Equal Opportunity/
Affirmative Action Employer*

For Foreign Publication

UNIVERSITY OF ALBERTA DEPARTMENT OF GENETICS ASSISTANT PROFESSOR

We seek a higher plant geneticist. The successful applicant will investigate fundamental problems of the genetics of plants using both traditional and modern methodologies. The appointee will be expected to teach basic genetics as well as classical and molecular plant genetics at an advanced level. Opportunity exists for collaboration with the Plant Molecular Genetics and Plant Biotechnology Centre already established at the University of Alberta.

Candidates for the position should have a Ph.D. and relevant postdoctoral research experience. Establishment of an independent research program is an integral part of the appointee's duties and excellent research potential is considered imperative. The appointee's duties and excellent research potential is considered imperative. The appointment will commence July 1, 1989 or shortly thereafter. Salary will be commensurate with qualifications, within the Assistant Professor range, which is currently \$33,144-\$47,280.

Application deadline is December 16, 1988; applicants should send a curriculum vitae, reprints of several recent research publications and the names and addresses of at least three referees to:

P. J. Hastings
Chairman, Search Committee
Department of Genetics
University of Alberta
Edmonton, Alberta T6G 2E9
Canada

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Alberta is committed to the principle of equity in employment.

U.S. DEPARTMENT OF ENERGY
OFFICE OF HEALTH AND
ENVIRONMENTAL RESEARCH

Alexander Hollaender

D I S T I N G U I S H E D

Postdoctoral Fellowship Program

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- Information and applications

Hollaender Postdoctoral Fellowships
University Programs Division



Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117
(615) 576-3190

Deadline January 17, 1989

JUNIOR RESEARCH BIOCHEMIST

Merck Sharp & Dohme Research Laboratories, a world leader in the development of ethical pharmaceuticals for human and animal health, is currently offering an excellent career opportunity for a biochemist to join the Department of Fermentation Microbiology in a junior research position.

The position will require a M.S. degree or B.S. plus two or more years of biochemical experience and will entail supervised research into the enzymology and intermediary metabolism of polyketide-producing Actinomycetes. Experience with HPLC, FPLC and enzyme assay and purification would be especially helpful.

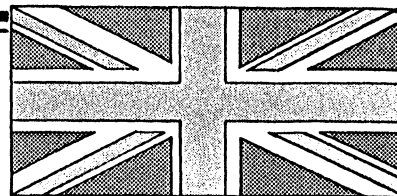
Salary and benefits are excellent. Our location is Rahway, New Jersey, 25 miles from New York City. Interested applicants should submit a resume to **Ms. Dolores Barefield, Merck Sharp and Dohme Research Laboratories, P.O. Box 2000, WBD-362, Rahway, New Jersey 07065.**

EQUAL OPPORTUNITY EMPLOYER



Merck & Co., Inc.

RESEARCH AND DEVELOPMENT OPPORTUNITIES IN THE UK

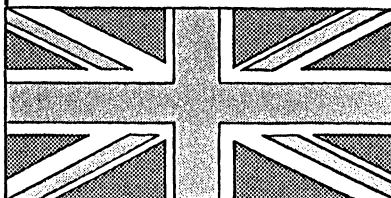


Amersham International, a world leader in immunodiagnostic products, is aggressively expanding its research and development efforts particularly in the area of infectious diseases and is seeking the creative and managerial scientific talent to make this happen.

Due to ambitious goals for its Diagnostic Products Division, the company has begun a worldwide search for British Nationals, who wish to return to the U.K., as well as for Americans, who desire to relocate abroad, to fill a number of bench research and scientific management positions. The scientists we seek possess degrees in a life science discipline (doctorates are an asset) and several years of industrial experience in the research and development of immunodiagnostics ideally in infectious disease testing. Appropriate post-doctoral experience in academia or in the hospital sector may partially substitute. Experience using a multi-disciplinary approach to solving research problems is desirable.

Amersham International can offer you a challenging opportunity in the UK within a fast-paced expanding environment where creativity and innovation are recognized. In addition we are offering a competitive starting salary and a relocation package. Please submit your curriculum vitae with your salary requirements to:

Human Resources (CLB)
Amersham Corporation
2636 S. Clearbrook Drive
Arlington Heights, IL 60005-4692
Equal Opportunity Employer, M/F/V/H



Amersham

POSITIONS OPEN

DEPARTMENT OF BIOLOGY UNIVERSITY OF VIRGINIA

FACULTY POSITIONS at the junior or senior level are available in the research group investigating basic mechanisms of biological rhythmicity. We seek applicants with research interests in circadian rhythms, neuronal oscillations, reproductive cycles or other aspects of temporal organization, as well as expertise in a contemporary biological field such as neurobiology, molecular genetics or cell biology. Successful applicants will combine outstanding research accomplishments or potential with ability to contribute to the intellectual life of a department dedicated to the highest level of undergraduate and graduate education. Please send curriculum vitae, including a description of research plans and three letters of reference by 1 February 1989, to: **Michael Menaker, Chairman, Department of Biology, Gilmer Hall, University of Virginia, Charlottesville, VA 22901. Equal Opportunity/Affirmative Action Employer.**

GROUP LEADER/BIOSCIENCES. Establish and maintain a capability for research in molecular biology, recombinant DNA and microbial genetics; to use these techniques to generate novel microbial strains for improved phenylalanine production and potential new products. Specifically, to bring special skills in microbial genetics to this research; supervise and coordinate activities of the other group members; generate, evaluate and implement new project ideas; establish and maintain links with other groups in the Company and serve as a channel of communication with higher management. Ph.D. in bacteriology or microbiology required together with 1 year and 6 months of experience in the job offered or 1 year and 6 months of experience as a postdoctoral research associate or scientist. The required experience must have involved the conduct of research and development in the production of phenylalanine by constructing bacterial strains having functional genetic modifications specific for improved amino acid biosynthesis. Forty hours: Monday/Friday; 9 a.m. to 5 p.m., \$58,000 per year. Send résumé and Social Security number to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Mr. Robert S. Felton, Reference # V-IL 8621-F. An Employer paid ad.**

HEAD: Department of Biology: The University of Akron has a position opening beginning in September, 1989. Applicants should have demonstrated evidence of administrative ability, classroom experience and a continuing record of funded research in a biological specialty. The University of Akron is the third largest state university in Ohio with over 27,000 students. The 21-member Biology Department provides teaching and research assistantships for 40 of its graduate students and anticipates having a biomedical Ph.D. degree program in 1989 in consort with three other state institutions in northeastern Ohio. Current research programs in the Biology Department include the areas of animal physiology, immunology, microbiology, molecular and cellular biology, and pollination ecology. Applications and nominations should include curriculum vitae and five letters of recommendation relating to administrative, teaching and research qualifications. Deadline for applications is 31 December 1988. Applications, nominations, and letters of recommendation should be addressed to: **L. W. Macior, Ph.D., Chairman, Search Committee, Department of Biology, The University of Akron, Akron, OH 44325. The University of Akron is an Equal Education and Employment Institution.**

HEALTH SCIENTIST—Advanced degree in a physical science with at least 2 years of exposure assessment experience. Experience with human/environmental exposure assessment techniques and models important. Knowledge of hazardous waste and other health and environmental issues is desirable. This person will provide technical support to committees/work groups on exposure assessment issues; administer research programs related to industrial hygiene, occupational medicine and epidemiology; and respond to requests from member oil companies, outside groups, and the public for information related to the above.

Send résumé with salary history to: **Employee Relations, American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005. An Equal Opportunity Employer.**

POSITIONS OPEN

GENETICIST. The Biology Department of Albion College announces a tenure-track position as assistant professor to begin in August 1989. A Ph.D. is required, and teaching experience is preferred. The successful candidate will be expected to teach upper level, undergraduate courses in general genetics with lab, including some human genetics, and introductory techniques in recombinant DNA technology. The candidate will also share responsibilities in introductory biology courses. Modern facilities include TEM, SEM, an incubator-shaker, controlled environment chambers, and a 130-acre nature center. A research program incorporating undergraduate students is expected. *Albion College encourages applications from female and minority candidates.* Send letter of application, current curriculum vitae, transcripts, and three letters of reference to: **Dr. Jeffrey C. Carrier, Chair, Biology Department, Albion College, Albion, MI 49224. Deadline for applications is 1 December 1988. Albion College is an Equal Opportunity Employer.**

HEAD DEPARTMENT OF PATHOLOGY

Texas A&M University, College of Medicine, College Station, Texas, is searching for a replacement for the retiring Head of the Department of Pathology and Laboratory Medicine. Being sought is a person with a record of excellence in teaching undergraduate medical students, a commitment to excellence in research, and an ability to work closely and harmoniously with the members of the Pathology services of the affiliated teaching institutions. These are the Olin E. Teague Veterans' Center and the Scott and White Memorial Hospital and Clinic, in Temple, Texas. A physician certified in both anatomic and clinical pathology is preferred, but all applicants will be given serious consideration. Moderate service responsibilities of the position will allow time for development of a vigorous research program in College Station and collaborative research with investigators at the Clinical Campus in Temple. Other attractive features include small class sizes, enthusiastic students, an agreeable balance of rural and urban lifestyles in a community of about 100,000, and location on the campus of a major research and teaching university. Interested candidates should send curriculum vitae and names of three references to: **Pathology Search Committee, Medical Biochemistry and Genetics Department, Texas A&M University, College of Medicine, 440 Reynolds Medical Sciences Building, College Station, TX 77843-1114. Texas A&M University is an Equal Opportunity/Affirmative Action Employer.**

HUMAN GENETICIST

The Department of Molecular Genetics, Biochemistry, and Microbiology is searching for a human geneticist particularly an individual who is currently interested in genetic diseases affecting the cardiovascular system. The appointment is in the tenure-track and can be at any level. Generous space and start up monies are available. The current department has 26 faculty and 50 graduate students and maintains core facilities in tissue culture, DNA technology and transgenic mice. Interested applicants should submit their curriculum vitae, a short write-up of their anticipated research, and names of three individuals who are qualified to judge their abilities to: **Jerry B. Lingrel, Ph.D., Professor and Chair, Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267-0524.**

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

INSECT NEUROPHYSIOLOGY/MORPHOLOGY

Tenure-track **ASSISTANT/ASSOCIATE PROFESSOR.** Ph.D. required, with training in modern neurobiology, including molecular approaches. Appointee will conduct independent research, teach insect morphology, and participate in courses in insect physiology and toxicology. Send curriculum vitae and names of five references to: **Dr. T. L. Payne, Department of Entomology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, by 15 January 1989. An Equal Opportunity Employer.**

POSITIONS OPEN

IMMUNOLOGIST—VIROLOGIST (search reopened)—The Stephen F. Austin State University Biology Department invites applications for a tenure-track position of assistant professor. A Ph.D. with specialties in immunology and/or virology is required. Duties include teaching immunology, virology and introductory biology; research and publication will be expected. Salary commensurate with training and experience. Duties begin in August and closing date for application is 15 December 1988. Send curriculum vitae including transcripts and have three letters of recommendation sent to: **W. V. Robertson, Search Committee Chairman, Box 13003, SFA, Nacogdoches, TX 75962. An Equal Opportunity/Affirmative Action Employer.**

IMMUNOTOXICOLOGIST

The Department of Biological Sciences at Wright State University invites applications for a tenure-track assistant professorship in immunotoxicology starting fall, 1989. Postdoctoral experience is preferred but not required. Research responsibilities will include developing an active, extramurally-funded research program and directing graduate students. While the primary responsibility of the successful candidate will be to contribute professionally within the Department of Biological Sciences, there are opportunities for interactions with other life science departments. The department offers the M.S. degree and participates in an interdisciplinary Ph.D. program in the biomedical sciences. Teaching responsibilities will include an undergraduate course in immunology, a graduate-level course in their area of expertise, and participating in the department's introductory biology and allied health programs. Applicants must have a Ph.D., be enthusiastic, strongly motivated toward creative research, and committed to excellent teaching. Please submit curriculum vitae, a description of proposed research projects, recent reprints, and the names, addresses, and telephone numbers of three references to: **Immunotoxicologist Search Committee, Department of Biological Sciences, Wright State University, Dayton, OH 45435 by 15 January 1989. Wright State University is an Equal Opportunity/Affirmative Action Employer.**

INTERNAL MEDICINE: Positions as **ASSISTANT, ASSOCIATE OR PROFESSOR** level available in Allergy/Immunology, Rheumatology, Endocrinology/Metabolism, Nephrology, Hematology/Oncology, and Epidemiology/AIDS. Locations: Los Angeles County/Martin Luther King Hospital/Charles R. Drew University of Medicine and Science/UCLA School of Medicine. Applicant must be eligible for California license and have demonstrated academic excellence. Please send curriculum vitae and three references to: **M. Thadepalli, M.D., Internal Medicine, King/Drew Medical Center, 12021 South Wilmington Avenue, Los Angeles, CA 90059. Telephone: 213-603-4574. Affirmative Action/Equal Opportunity Employer.**

JUNIOR FACULTY POSITIONS available in the Pharmacology and Developmental Therapeutics of antineoplastic agents targeted for specific human cancer types. Candidates should have the Ph.D. degree with a minimum of 3 years of postdoctoral experience in a related field. The two programs are as follows:

1) Colon adenocarcinoma. The biochemistry and pharmacology of modulation of antimetabolites with thymidylate synthase as the primary target. Studies will focus on biochemical approaches to modulate reduced folate pools and to optimize drug scheduling for therapeutic gain. Research will also identify factors that influence the regulation and turnover of thymidylate synthase in elucidating the importance of the enzyme as a therapeutic target.

Apply: **Dr. J. A. Houghton.** Salary negotiable.

2) Pediatric rhabdomyosarcoma. Drug targeting against differentiation antigens in tumors of skeletal muscle. This will involve the molecular cloning of differentiation antigens together with their identification and characterization, and targeting drugs against appropriate antigens in vitro and in vivo using antibodies as carriers. Apply: **Dr. P. J. Houghton.** Salary negotiable.

Send curriculum vitae and names of three references to: **Laboratories for Developmental Therapeutics, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

THE UNIVERSITY OF SYDNEY AUSTRALIA SCHOOL OF BIOLOGICAL SCIENCES

LECTURESHIP in Plant Sciences—Ref. no. 40/01: Preference may be given to suitable qualified applicants with interests in fungal biology or cryptogamic botany.

LECTURESHIP in Animal Biology—Ref. no. 40/02: Preference may be given to suitably qualified applicants with interests in the physiology of terrestrial vertebrates.

General: Appointments to lectureships have the potential to lead to tenure and are usually probationary for 3 years. With the approval of the University staff with the rank of lecturer and above may undertake limited consulting work. The University reserves the right not to proceed with any appointment for financial or other reasons.

Salary: A\$29,842 to A\$38,932 per annum.

Applications, quoting reference number and including curriculum vitae, list of publications and the names, addresses, and Fax numbers of three referees, to: **The Registrar, Staff Office, University of Sydney, NSW 2006 Australia (or Fax: 612-692 4316)** by 25 November 1988.

Equal Employment Opportunity is University policy.

MOLECULAR BIOLOGIST: Associate or full professor. Carthage College is seeking an experienced molecular biologist who is dedicated to both excellent undergraduate teaching and research and who is eager to accept the challenge of integrating molecular biology into what has been a more traditional program in the biological sciences. This is a tenure-track appointment for the successful person with a Ph.D. degree who is enthusiastic about working closely with undergraduates and sharing research expertise with them in the setting of a small liberal arts college. Please send curriculum vitae and three letters of recommendation to: **Search Committee, c/o Dr. Evelyn Crump, Biology Department, Carthage College, Kenosha, WI 53141.** Closing date is 15 December 1988. *Carthage is an Equal Opportunity Employer.*

POSITIONS OPEN

Yale University/METAMORPHIC PETROLOGY. The department of Geology and Geophysics invites applications for a **JUNIOR FACULTY** appointment in the topic area of metamorphic petrology. We are particularly interested in field-based studies of regional-scale metamorphism. Examples of research areas include the tectonic evolution of metamorphic belts, fluid and heat flow during metamorphism, physico-chemical and kinetic constraints on the history and evolution of metamorphic rocks, and the chronology of metamorphic events. The appointment will complement existing programs in stable isotope geochemistry, diagenesis, reaction kinetics, genesis of mineral deposits, fluid-rock interactions, tectonics of convergent margins, and processes of granitic magmatism.

Applicants should submit a letter of application, curriculum vitae, publications, and the names and addresses of at least three references to: **Dr. Barry Saltzman, Chairman, Department of Geology and Geophysics, Yale University, P.O. Box 6666, New Haven, CT 06520.** Completed applications must be received by 1 March 1989.

Yale University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR VIROLOGIST. The Department of Microbiology at Washington State University (WSU) invites applications for a tenure-track faculty position at the assistant/associate professor level. Preference will be given to individuals with research interests in the molecular basis of pathogenesis. Applicants must have postdoctoral training. The successful candidate will be expected to establish an active research program and participate in graduate, medical student and undergraduate teaching. Send curriculum vitae, statement of research interests and professional objectives, and names of three references to: **Dr. L. P. Mallavia, Search Committee, Department of Microbiology, WSU, Pullman, WA 99164-4340.** Application deadline 3 January 1989 or until position is filled. *An Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply.*

POSITIONS OPEN

MEDICAL DIRECTOR, IMMUNOPATHOLOGY associate professor/professor level; College of Medicine at SUNY Health Science Center at Syracuse (University Hospital position). Applicants should be Board-certified in anatomic, clinical or anatomic/clinical pathology, or another clinical discipline with advanced training in immunology/immunopathology and have research and teaching experience. Responsibilities include supervision of immunology laboratory, close affiliation with clinical services, collaborative research involvement and teaching. Applications accepted through 31 December 1988. Send curriculum vitae, supporting information, and three references to: **Gregory A. Threutte, M.D., Chair, Search Committee for Director of Immunopathology, Division of Clinical Pathology, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210.** *Equal Employment Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST

Tenure-track position for assistant professor beginning 15 August 1989. Responsibilities include teaching microbiology and general biology. The Department offers two majors: Biology and Environmental Earth Science. Possibilities for developing other related advanced courses exist. Students from both majors as well as allied health enroll in microbiology, thus it is important that the course cover a broad range of topics. Broad background in microbiology and Ph.D. preferred. Candidates should be motivated toward excellence in teaching and have desire to involve undergraduates in basic research. The College faculty development program can provide modest funds to support research. MWC is a small, state-supported, coeducational, liberal arts and sciences institution located 50 miles south of Washington, D.C. Closing date: 8 December 1988. Send curriculum vitae, three letters of reference and transcripts to: **Dr. Michael L. Bass, Chairperson, Department of Biological Sciences, Mary Washington College, Fredericksburg, VA 22401-5358.** *Equal Employment Opportunity/Affirmative Action Employer.*

DIRECTOR OF BIOTECHNOLOGY University of Nebraska-Lincoln

The University of Nebraska-Lincoln invites applications and nominations for the position of Director of Biotechnology. This position will be a full-time position with half-time administrative responsibilities. The Director administers the Center for Biotechnology and provides leadership for biotechnology research, teaching, and public service programs throughout UNL. The Director facilitates collaborative research and serves as the prime adviser to the UNL administration concerning all aspects of the coordination and enhancement of biotechnology. In fulfilling these responsibilities the Director reports to the Vice Chancellor for Research and Graduate Studies.

In cooperation with the administration, the Director has responsibility for a budget that will increase by several million dollars in the next few years supported from the State Research Initiative Fund to achieve research excellence in targeted areas of science and technology. These funds will involve the Director in the appointment of 15-20 new faculty in biotechnology during the next few years. The Director also has an operating budget to utilize for seed money, equipment purchases, and a seminar series. The Director will be expected to pursue an active program of research in a department appropriate to the individual's academic background.

The position requires a Ph.D. in one of the biological sciences or a related field with proven ability to perform competitive research in some area of biotechnology. The Director must have the ability to understand research programs in basic and applied biology, to work cooperatively with a wide range of scientists, and to communicate biotechnology to external constituencies.

The salary of the Director will be commensurate with qualifications and experience. Applicants and nominees should submit a *curriculum vitae*, a letter expressing interest in the position, and a list of at least three references postmarked by 15 December 1988 to:

**Dr. James Van Etten, Chair
Advisory Committee for the Director of Biotechnology
University of Nebraska-Lincoln
423 Plant Science
Lincoln, Nebraska 68583-0722
Telephone: 402-472-3168**

Affirmative Action/Equal Opportunity Employer

COMPUTATIONAL BIOLOGIST

The Biological and Chemical Data Department of Merck Sharp & Dohme Research Laboratories is seeking highly talented individuals with a background in biochemistry and/or molecular biology who have an interest in (1) applying computer technology to problems of storing, querying, and linking biological and chemical data and (2) using computer technology to analyze molecular biological data. Vacancies presently exist in each of these areas.

The successful candidate for position (1) should have a B.S./M.S. or equivalent in a biological science with 2 to 3 years of experience and should have knowledge of the fundamentals of computer programming in a VAX environment. Experience with RS1 and ORACLE is desired.

For position (2), located in West Point, PA, the successful candidate should have a Ph.D. or equivalent in biochemistry, molecular biology, or microbiology or a lesser degree with appropriate experience and should have knowledge of molecular biology software such as Intelligenetics or the University of Wisconsin packages.

Both positions require excellent interpersonal skills and require extensive interactions with other computer professionals and scientific researchers. Teaching experience is desired.

Merck is noted for its professional environment, excellent salaries and outstanding benefit program. To explore these opportunities please forward credentials with salary history in confidence to **Ms. Lonnie Deetz, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

EQUAL OPPORTUNITY EMPLOYER



Merck & Co., Inc.

POSITIONS OPEN

NEUROBIOLOGIST AND DEVELOPMENTAL BIOLOGIST

Applications are invited for two tenure-track faculty positions to begin August, 1989. We anticipate the possibility of filling one position at the **DEPARTMENT CHAIRPERSON** level (associate or full professor), and the other at the **ASSISTANT PROFESSOR** rank. Requirements include the Ph.D. and postdoctoral experience in at least one of these areas, a strong commitment to quality teaching and research, and for chairperson, the ability to provide vigorous academic leadership. For one position, a molecular orientation is desirable. Responsibilities include teaching introductory and specialty courses at undergraduate and Master's levels, conducting extramurally funded research, and fulfilling service/leadership responsibilities. To apply submit by 16 December 1988 your curriculum vitae, three supporting letters, reprints, official transcripts, and statements of your teaching philosophy and research plans. For chairperson, also summarize your principles of academic management. Send to: **Biology Search Committee Chairperson, Department of Biological Sciences, c/o Office of Human Resources Management, Duquesne University, Pittsburgh, PA 15282.**

An Equal Opportunity/Affirmative Action Employer.

NEUROBIOLOGISTS. Department of Anatomy and Neurobiology has two tenure-track positions at the assistant or associate professor level. Candidates with experience in current cellular and molecular approaches to problems in neurobiology of development, reproduction, regeneration, aging, and in neuroendocrinology (especially control of secretory processes of pituitary cells), are preferred. Excellent opportunities exist for research collaboration with endowed Centers for Research in Aging and Cancer, and a Magnetic Resonance Imaging facility. Ph.D. degree and 2 years of postdoctoral research training required, as well as a strong commitment to research. Participation in team-teaching of neuroanatomy or gross anatomy and in graduate courses is expected. Good start-up funding, space and competitive salaries are available. Send curriculum vitae, description of research accomplishments, summary of research plan and names and addresses of four references to: **Dr. M. B. Nikitovitch-Winer, Chair, Department of Anatomy and Neurobiology, University of Kentucky Medical Center, Lexington, KY 40536-0084.** Deadline for applications 15 January 1989.

NEUROSCIENCE FACULTY POSITION UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

The Department of Physiology, UCSF, seeks candidates for a tenure-track position as assistant or associate professor. The most important criteria for selection are excellence and originality of research. Although we welcome applicants in any area of neuroscience, we are particularly interested in those taking cellular or biophysical approaches. The person appointed will participate in graduate and professional teaching. Interested individuals should send curriculum vitae and summary of research, and arrange to have at least three letters of recommendation sent to:

**Neuroscience Search Committee
Department of Physiology
University of California
San Francisco, CA 94143-0444**

Applications and letters should be received by 1 January 1989. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL FELLOW IN ANTILEUKEMIC AND ANTIVIRAL DRUG PHARMACOLOGY. A postdoctoral fellow position is open with funding for 2 to 3 years in the Division of Hematology/Oncology, Department of Pediatrics in the Pharmacology Section, University of Southern California at Childrens Hospital of Los Angeles for studies in the cellular pharmacology of anti-HIV and antileukemic nucleoside analogues. Fully equipped laboratory space is available for use in the new Research Tower. Send curriculum vitae, a statement of research interests, and the names of three references to: **Vassilios I. Avramis, Ph.D., Division of Hematology/Oncology, Childrens Hospital of Los Angeles, P.O. Box 54700, Los Angeles, CA 90054-0700.** *An Equal Opportunity Employer.*

POSITIONS OPEN

ORGANIC CHEMIST

The Stroud Water Research Center has earned an international reputation for conducting research on the ecology of streams and their watersheds. As a field station of the Academy of Natural Sciences of Philadelphia, we share a long-term commitment to basic environmental research. The Center is located in the White Clay Creek Experimental Watershed, approximately 40 miles southwest of Philadelphia. We currently have an opportunity available for an organic chemist to join an interdisciplinary team of scientists with interests ranging from microbial ecology to molecular genetics of insects and ecosystem modelling.

Ph.D. candidates with broad research interests and a strong research background in theoretical and analytical aspects of organic chemistry should apply. The scientist will be expected to develop an independently funded research program emphasizing chemical interactions of ecological importance, and to collaborate with other staff scientists. Candidates with interests in processes affecting the translocation and transformation of natural and synthetic organic chemicals and inorganic nutrients in soils, surface water and groundwater of small watersheds are encouraged to apply.

Send résumé, transcripts, research plans, representative publications, and arrange for three letters of references to: **Dr. Bernard Sweeney, Stroud Water Research Center, Academy of Natural Sciences, R.D. #1, Box 512, Avondale, PA 19311.** Applications completed by 30 November 1988 will receive priority consideration.

The Academy is an Equal Opportunity/Affirmative Action Employer.

PLANT POPULATION BIOLOGIST

Plant population biologist. Tenure-track assistant professor, fall 1988. Requires Ph.D. in plant population biology; postdoctorate preferred. Duties include teaching plant population biology and conservation biology or biodiversity, participation in general biology program, and supervision of master's candidates. Research in plant population biology and conservation biology is expected. Application including curriculum vitae, a brief statement of research interests, graduate transcripts, and three letters of recommendation should be sent by 25 November 1988 to: **Dr. David B. Benner, Chair of Search Committee, Department of Biological Sciences, P.O. Box 23,590A, East Tennessee State University, Johnson City, TN 37614.** *ETSU is an Equal Opportunity/Affirmative Action Employer and employs only U.S. citizens and aliens authorized to work in the United States.*

POSTDOCTORAL FELLOWSHIP POSITION available immediately for Ph.D. with the degree in biochemical or biological sciences to work in the field of cancer chemotherapy. Research will involve elucidation of the mechanism(s) of action of new anticancer agents that will require biochemical and molecular cloning techniques to define drug targets. Salary: \$22,000. Send curriculum vitae and names of three references to: **Dr. P. J. Houghton, Laboratories for Developmental Therapeutics, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL NMR POSITION

We have an immediate opening for a postdoctoral NMR position for a Ph.D. in physical chemistry or biophysics/biochemistry. The candidate must have experience with high-field NMR spectrometers and be familiar with modern 2D-NMR spectroscopy. Ability to devise or implement new NMR experiments is essential. The candidate will be involved in studies using NMR methods to characterize antigenic and immunogenic determinants within lipopolysaccharides of gram-negative bacteria. The project involves a team consisting of a biologist, an immunochemist, an organic chemist, and a mass spectrometrists. *The candidate must be an American citizen or a permanent resident.* The position is renewable up to 3 years. Candidates should submit curriculum vitae and a letter describing experience with NMR. Three letters of recommendation should also be sent to: **Dr. Ryohei Yamasaki, Center for Immunochemistry at University of California, San Francisco/VA Medical Center, 662/113A, 4150 Clement Street, San Francisco, CA 94121.** Deadline is 5 December 1988 or until position filled. *Equal Opportunity Employer, U.S. Citizenship is required.*

POSITIONS OPEN

PLANT SYSTEMATICS HARVARD UNIVERSITY DEPARTMENT OF ORGANISMIC AND EVOLUTIONARY BIOLOGY TWO POSITIONS

FULL PROFESSOR—evolution and phylogeny of vascular plants, and non-tenured professor at the **ASSISTANT OR ASSOCIATE** rank—systematics of plants or fungi. Candidates should employ molecular techniques in their research.

Applicants should have demonstrated excellence in research and a strong commitment to teaching at the graduate and undergraduate levels. Curriculum vitae, statement of interest and names of three recommendations should be sent to the committee no later than 1 January 1989. Committee: **Plant Systematics Search, Department of Organismic and Evolutionary Biology, 26 Oxford Street, Cambridge, MA 02138.**

Harvard University is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF OTAGO DUNEDIN—NEW ZEALAND POSTDOCTORAL FELLOW IN AQUATIC ECOLOGY

Applications are invited for a postdoctoral fellowship, tenable for 2 years commencing in mid-1989, to work in collaboration with **Professor C. R. Townsend** (who will take up appointment as Chairman of the Department of Zoology on 1 January 1989). Applicants should have completed the requirements for the award of the degree of Doctor of Philosophy, and have experience in the ecology of streams, lakes or the marine benthos. Expertise in theoretical ecology and computer modelling is also desirable. The topic for research will be decided by mutual agreement, but candidates should indicate in their applications research areas they would like to pursue. Applications close on 30 November 1988. Salary NZ\$35,000 per annum.

Applicants should send their curriculum vitae and the names of two academic referees to:

**Dr. C. R. Townsend
School of Biological Sciences
University of East Anglia
Norwich, NR4 7TJ
United Kingdom**

A further copy, quoting reference number A88/59, should be sent directly to: **The Registrar, University of Otago, P.O. Box 56, Dunedin, New Zealand. D. W. Girvan, Registrar.**

POSTDOCTORAL FELLOWSHIP available immediately for an individual to work on biochemical aspects of T lymphocyte activation. Ongoing projects include studies of myc and fos oncogene expression, transmembrane Ca^{2+} fluxes, and protein kinase function in T cell subsets of normal and aging mice. Send curriculum vitae, together with names and telephone numbers of three references to: **Richard A. Miller, Boston University Medical School, 80 East Concord Street, Boston, MA 02118.** *Women and members of minority groups are particularly encouraged to apply for this training position.*

POSTDOCTORAL FELLOWSHIP—Molecular biological studies of structural and functional properties of membrane transport carrier systems in mammalian cells. This project is a component of a multidisciplinary cancer biology training program. Starting stipend: \$22,000 per annum. Apply to: **Dr. I. David Goldman, Medical College of Virginia, Box 230, MCV Station, Richmond, VA 23298.** *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

TWO POSTDOCTORAL FELLOWSHIP POSITIONS: available immediately to study xenobiotic metabolism in human/mammalian tissues. Ph.D. in biochemistry, pharmacology or toxicology is required. Experience in enzymology, protein purification or pharmacokinetics is desirable. Send résumé and three references to: **Dr. Arun Kulkarni, Florida Toxicology Research Center, University of South Florida, COPH-MHH 104, 13301 Bruce B. Downs Boulevard, Tampa, FL 33612.** Telephone: 813-974-3623.

DIRECTOR CARDIOVASCULAR/ PULMONARY RESEARCH INSTITUTE

Deborah Research Institute has a position available for Ph.D. with broad research experience to serve as Scientific Director of our cardiovascular and pulmonary institute. The successful candidate should have experience with myocardial protection, new perfusion methods, left-ventricular assist devices, laser surgery, heart transplantation research or valve and blood vessel transplantation research.

In addition, the candidate will be able to bring about a balance between basic and clinical research, as well as direct efforts in extramural grant writing, grant distribution and the direction and planning of the scientific activities of our institute.

We adjoin Deborah Heart and Lung Hospital. For confidential consideration, please forward your resume to:

Chairman of the Board



**DEBORAH RESEARCH
INSTITUTE**

Trenton Road
Browns Mills, NJ 08015
Equal Opportunity Employer

TOXICOLOGIST Regulatory Safety Studies

COMMITTED
TO
SCIENTIFIC
EXCELLENCE



The Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug Inc., announces openings for a Senior Research Biologist in the Toxicology Department at its Rensselaer, New York facility.

Our expanding Drug Safety Evaluation Group is seeking a Toxicologist with 4-6 years experience in conducting regulatory safety studies. Experience with the safety evaluation of diagnostic imaging agents is highly desirable, but not mandatory. The successful candidate will have a Ph.D. in toxicology, pharmacology or a related discipline and be diplomate of the American Board of Toxicology or board eligible.

The Rensselaer facility is located in upstate New York near Albany, a center for summer and winter recreational activities. Sterling offers attractive salary and benefit programs and an exciting work environment based on a project team approach to research and development.

Please send resume including salary requirements in confidence to:

**Mr. William F. Sheldon
Employment Manager**

STERLING RESEARCH GROUP

A Division of Sterling Drug Inc.
Columbia Turnpike
Rensselaer, New York 12144
A Subsidiary of the
EASTMAN KODAK COMPANY

An Equal Opportunity Employer M/F/H/V

POSTDOCTORAL FELLOWSHIPS in MOLECULAR BIOLOGY

Howard Hughes
Medical Institute
at The University of Chicago

Postdoctoral positions are available for study in the following areas:

(1) Molecular aspects of gene expression during differentiation/development in human epithelia, particularly skin. Research involves transgenic mouse technology, recombinant DNA methods & cell culture. Emphasis: epithelial-specific gene regulation, structure/function of keratins and epithelial-mesenchymal interactions.

(2) The function and regulation of heat-shock proteins. Utilizing genetic, molecular and immunological methods to study hs gene regulation at the level of translation and RNA splicing and to investigate the molecular functions of the major hsp in *Saccharomyces cerevisiae* and *Drosophila melanogaster*.

Applicants should submit a curriculum vitae and names of three references to:

(1) Dr. Elaine Fuchs or
(2) Dr. Susan Lindquist
Howard Hughes Medical Institute
Department of
Molecular Genetics and Cell Biology

**THE UNIVERSITY
OF CHICAGO**
Chicago, IL 60637

*The Howard Hughes Medical Institute/
The University of Chicago is an Equal Opportunity/
Affirmative Action Employer.*

Research Opportunities In X-Ray and UV Radiation

The National Synchrotron Light Source (NSLS) at Brookhaven National Laboratory is a dedicated synchrotron radiation user facility with two electron storage rings. The NSLS X-ray ring operates at 2.5 GeV providing an intense photon source from 1 keV to 20 keV. The UV ring operates at 750 MeV to optimize radiation at energies from 10 eV to 1 keV. Beam time is available without charge to users. Proprietary work can also be done on a full cost recovery basis.

Experimental facilities using numerous research techniques are available for scientists wishing to conduct experiments. Among the techniques are EXAFS (extended X-ray absorption fine structure), scattering, diffraction, topography, fluorescence, lithography, microscopy, gas phase spectroscopy, photoemission, circular dichroism, and infrared vibrational spectroscopy.

Scientists interested in utilizing existing facilities or in establishing new research programs at the NSLS should contact: Michael L. Knotek, Chairman National Synchrotron Light Source Department, Building 725, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973. (516) 282-4966. Equal Opportunity Employer m/f.



**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES INC.

POSITIONS OPEN

POSTDOCTORAL POSITION in pharmacology/physiology to study the regulation of ion channels by protein phosphorylation. Experience in phosphoprotein research is desirable but not essential. Send curriculum vitae and names of three references to: **Dr. S. Shenolikar, Department of Pharmacology, University of Texas Medical School at Houston, P.O. Box 20708, Houston, TX 77025** or **Dr. A. M. Brown, Professor and Chairman, Department of Physiology, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION at the Monell Chemical Senses Center. Interdisciplinary program in mammalian chemical communication with close interaction between chemists and biologists. Studies involve analysis of volatile molecules controlled by genes in the major histocompatibility complex and their role in pheromonal communication. A strong background in organic analytical chemistry, with an interest in biochemistry and in working at the interface between chemistry and biology, is required. Send curriculum vitae and three letters of reference to: **Professor Amos B. Smith, III, or Dr. Kunio Yamazaki, Monell Chemical Senses Center, 3500 Market Street, Philadelphia, PA 19104. Monell is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available starting July 1989 to study the structure, function and regulation of the proton pumps involved in acidification of intracellular compartments. Experience in membrane protein chemistry or molecular biology desirable. Send curriculum vitae, reprints, and three letters of reference to: **Dr. Michael Forgac, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON

The Institute for Environmental Studies, University of Washington, has a **POSTDOCTORAL POSITION** available beginning 1 January 1989, to work in an interdisciplinary research program in conservation biology. Appointment would be for 1 year, with possible renewal for a second year. Applicants are sought with training or experience in either a biological science with a focus on ecology or systematics, or in natural resource economics or a related field dealing with resource conservation. Send curriculum vitae and names and addresses of three references to: **Conway Leovy, Director, Institute for Environmental Studies, FM-12, University of Washington, Seattle, WA 98195. The University of Washington is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION COASTAL MARINE SCIENCES

The University of Georgia's Marine Institute is seeking an outstanding candidate in the marine sciences. Individuals from all disciplines are encouraged to apply. The candidate will be expected to interact with the Marine Institute's resident staff. Current research at the Marine Institute includes biogeochemistry, nutrient and trace metal cycling, material and energy flow studies, faunal population and community dynamics, and microbial ecology. The salary is \$19,500 for 1 year, with possible extension to a second year. Interested individuals should send curriculum vitae, and the names of three references to: **Dr. Ronald P. Kiene, Chairman, Postdoctoral Search Committee, University of Georgia Marine Institute, Sapelo Island, GA 31327. Deadline for applications is 1 February 1989. The University of Georgia is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN INSECT HORMONE BIOCHEMISTRY

Two immediate openings. One position to isolate and sequence new peptide hormones from insects. Background in biochemistry and perhaps insect physiology, is necessary for position. One position to study aspects of juvenile hormone biosynthesis, requiring a biochemical background including knowledge of terpene or lipid biosynthetic pathways. Send curriculum vitae and three letters of recommendation by 1 January 1989 to: **Dr. David A. Schooley, Biochemistry, University of Nevada, Reno, NV 89557-0014. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available in a new program project involving the molecular analyses of hemoglobopathies. Applicant should have experience in gene mapping, cloning, and sequencing of DNA. Salary negotiable. Applicants should send curriculum vitae and names and addresses of three references to: **Dr. Titus H. J. Huisman, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to study mechanism of glucocorticoid action [JBO 263, 3474-3481 (1988)]. Experience in molecular biology desirable. Send curriculum vitae with names and addresses of three references to: **Dr. Clark W. Distelhorst, Department of Medicine, Case Western Reserve University (CWRU), Cleveland, OH 44106. CWRU is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. A postdoctoral position is available to investigate the enzymology of secondary metabolite biosynthesis. Experience in enzyme purification and protein biochemistry is required, experience in microbiology is desirable. Send résumé and three letters of reference to: **R. J. Parry, Department of Chemistry, Rice University, P.O. Box 1892, Houston, TX 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN BIOCHEMISTRY OF PLANT-INSECT INTERACTION

USDA-sponsored postdoctoral position for studies on role of anti-oxidant enzymes in defending insects against pro-oxidant allelochemicals. Primary and secondary antioxidant enzymes will be measured and characterized in a phytophagous insect model. Ph.D. in appropriate molecular or biological science. Candidates must have a demonstrated record of research experience and production including publications in areas relevant to position. Salary commensurate with experience. Send curriculum vitae and three letters of recommendation by 1 January 1989 to: **Dr. Ronald S. Pardini, Biochemistry, University of Nevada Reno, NV 89557-0014. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY

A postdoctoral position is immediately available in the Neurobiology Research Center at the State University of New York at Albany to study synaptic plasticity and development. Specific projects center on activity-dependent synaptic changes in the developing cat visual system (S. B. Tieman), the retinotectal projection of goldfish (J. T. Schmidt), the crayfish neuromuscular junction (G. A. Lnenicka), *Drosophila* visual system (H. V. B. Hirsch) or *Aplysia* nervous system (J. Jacklet). Candidates should have a Ph.D. in a related field and demonstrated expertise in one of the following: electrophysiology, monoclonal antibody production, immunohistochemistry, electrophoresis, HRP staining, tissue culture, *Drosophila* genetics or recombinant DNA technology. Send curriculum vitae and the names of three references to any of the above investigators at: **The Neurobiology Research Center, SUNY Albany, Albany, NY 12222.**

SUNY-Albany is an Equal Opportunity/Affirmative Action Employer. Applications from women, minority persons, handicapped persons, and special disabled or Vietnam veterans are especially welcome.

POSTDOCTORAL POSITIONS DEVELOPMENTAL/MOLECULAR BIOLOGY

Postdoctoral positions available to study molecular aspects of developmental biology with emphasis on the roles of cell adhesion molecules and cell-substrate adhesion molecules. Techniques utilized include gene and cDNA cloning, cellular transfection, protein chemistry, production of transgenic mice, in situ hybridization, immune histochemistry, and electron microscopy. Stipends available. Address inquiries to: **Dr. Gerald M. Edelman or Dr. Bruce A. Cunningham, The Rockefeller University, 1230 York Avenue, New York, NY 10021. Include statement of research interests, curriculum vitae, and names of three references.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for studies on receptor function and signal transduction systems in human platelets. Experience in protein purification. Send curriculum vitae and names of references to: **Dr. Kornecki, Department of Anatomy and Cell Biology, SUNY at Brooklyn Health Science Center, 450 Clarkson Avenue, Box 5, Brooklyn, NY 11203. Equal Opportunity/Affirmative Action Employer. DMC #C0233**

A POSTDOCTORAL POSITION IN MOLECULAR CARCINOGENESIS is available immediately to study the processing of specific DNA base modifications in defined genes within mammalian cells and evaluate the biological consequences of persistent damage. Experience in molecular, cellular and immunological approaches is desired. Send curriculum vitae and three letters of reference to: **Dr. Altaf A. Wani, Department of Radiology, College of Medicine, The Ohio State University, Columbus, OH 43210.**

POSTDOCTORAL POSITION PLANT PHYSIOLOGY/BIOCHEMISTRY/MOLECULAR BIOLOGY. Available from 1 November 1988. We are presently studying the metabolism of plant cells under low oxygen conditions (hypoxia and anoxia). We can support a postdoctoral worker to study aspects of energy metabolism, anaerobic C-metabolism, and protein/RNA metabolism. Additionally, we will explore gene regulation in stressed cells using DNA technology and a model plant transformation system. Experience in one or more of these areas is essential. The position offers an opportunity to become a member of a research team examining fundamental aspects of plant stress. Salary: \$20,000-\$23,000 per year plus benefits. Contact: **Dr. Malcolm Drew or Dr. Greg Cobb, Texas A&M University, Department of Horticultural Sciences, College Station, TX 77843-2133. Telephone: 409-845-5341. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION

A postdoctoral position is available to study molecular relationship between plants and insects.

The candidate will have to interact with on-going programs in molecular and cellular biology as well as with programs on insect control.

Applicant should have a Ph.D. in molecular or cellular biology or related discipline. Any experience with insects is desirable and will be appreciated.

The position is available immediately and will extend for 2 years, beginning when the successful candidate is identified.

The location is in the Research Center of Rhone-Poulenc Agrochimie in Lyon (France). After these 2 years, there will be opportunity to join the Molecular and Cellular Biology Team in the Research Center of Rhone-Poulenc Ag Co. in Research Triangle Park (North Carolina).

Send curriculum vitae and three references to: **Georges Freyssinet, Rhone-Poulenc Agrochimie, 14 Rue Pierre Baizet, 69009 Lyon, France.**

POSTDOCTORAL POSITIONS

Several positions exist for postdoctoral research fellows within the Henry M. Jackson Foundation, Retrovirus Laboratory in Rockville, Maryland. Applicants should have a major concentration in virology, microbiology, immunology, biochemistry, or protein chemistry. The Jackson Foundation is a nonprofit organization associated with the Uniformed Services University of the Health Sciences. Among other projects, the Foundation is engaged in a long-term study of human immunodeficiency virus (HIV) infections of military personnel. This research program will involve basic virologic and immunologic studies carried out in support of a variety of ongoing and planned clinical investigations in HIV infected subjects. The research will be done in association with established senior scientists in new laboratory facilities with ample resources for supplies and equipment. The positions will include a competitive salary and liberal benefits. Applicants should submit their curriculum vitae, a statement of current research interest and professional goals, together with the names and addresses of three references to: **Mr. Keith Johnson, Henry M. Jackson Foundation, 11426 Rockville Pike, Suite 400, Rockville, MD 20852-3007. The Foundation is an Equal Opportunity Employer.**

RESEARCH ASSOCIATES MOLECULAR BIOLOGY

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel pharmaceuticals. We have recently established a Molecular Biology Department to study the molecular basis of human cancer. Research in the fields of oncogenes, growth factors and their receptors, and genes involved in the control of cell proliferation will be of primary interest. Exceptional opportunities for experienced research associates are available in the following areas:

MOLECULAR CLONING

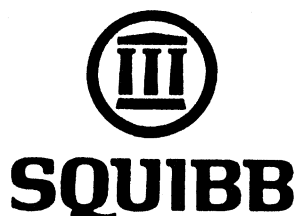
cDNA and genomic cloning in plasmid and phage vectors. Screening of libraries, subcloning, large scale DNA isolation. New approaches in rapid genomic cloning and sequence analysis.

GENE EXPRESSION

Vectors for the expression of foreign genes in bacteria, insect and/or mammalian cells. Transient and long term expression assays for regulatory elements and trans acting proteins.

Candidates should have a BS or MS degree and a minimum of one year of related research experience.

We can offer an excellent salary and comprehensive benefits package as well as the opportunity to pursue a stimulating and rewarding career. For confidential consideration, please submit your resume to: **The Squibb Institute for Medical Research, Human Resources Department 65, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



Molecular Biology Postdoctoral Position

CIBA-GEIGY Pharmaceuticals Division's 100-acre headquarters complex in Summit, New Jersey is engaged in research and development of drugs to treat cardiovascular and other disorders.

We seek a PhD in Molecular Biology or Biochemistry to conduct experiments directed at the cloning and expression of the apolipoprotein. The project will also involve purification and characterization of expressed proteins and study of lipoprotein-receptor interactions. To qualify for this challenging opportunity, your doctoral thesis should encompass work in molecular biology, including gene isolation, DNA transfection and cloning.

CIBA-GEIGY offers a highly professional environment with competitive salary and benefits. Apply in confidence with resume and salary history to: **CIBA-GEIGY Corporation, Staffing Center, Pharmaceuticals Division, Dept. KAR, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

Receptor Biochemist Group Leader

Parke-Davis Pharmaceutical Research Division, the Warner-Lambert Company, has an immediate opening for an innovative and experienced scientist to head up a receptor biochemistry group in the Biochemistry section. This is an important position, reporting directly to the section director and focusing on receptor biochemistry as it relates to modern drug discovery strategies.

Qualified applicants should possess the following:

- Ph.D. in Biochemistry, Pharmacology or other relevant discipline.
- 5-6 years' post-doctoral experience, with drug industry experience.
- Documented record of research excellence in receptor biochemistry involving both receptor site and second messenger system approaches. Individuals with experience in receptor cloning and expression would also be an advantage.
- Supervisory experience.

We offer excellent compensation and benefits at our modern facilities, adjacent to the University of Michigan campus. Interested, qualified applicants should send curriculum vitae and salary requirements to Ms. Sandra Hultquist, Human Resources, Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105.

PARKE-DAVIS

DIVISION OF WARNER LAMBERT COMPANY

"Equal Opportunity in Action"

POSITIONS OPEN

POSTDOCTORAL POSITIONS, Medical College of Wisconsin. Recent Ph.D.s with appropriate experience and interests are invited to apply for appointments in these areas:

Protein Structure/Function/Mechanism: Study of plant and recombinant enzymes involved in CO₂ assimilation. Background in enzymology, protein chemistry, or molecular biology desirable. (Dr. H. Mizioro).

Crystallographic and Mechanistic Analyses on Enzymes Involved in Lipid Metabolism: Background/experience in protein chemistry, enzyme mechanisms, computational chemistry or crystallography desirable (Dr. J. J. Kim).

Therapeutic Photosensitization: Program project involving antineoplastic sensitizing dyes. Experience in cell culturing and isolation/characterization of lipid peroxides desirable. (Dr. A. Girotti).

Send personal curriculum vitae plus names/telephone numbers of three references to appropriate faculty member in: **Department of Biochemistry, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.**

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately in group conducting research on protein and gene expression during human spermatogenesis. Emphasis on immunocytochemistry and in situ hybridization for antibodies. Laboratories of **Charles Flickinger and John Herr**. Excellent opportunities for interaction with colleagues in cellular, reproductive, and developmental biology. Interested persons should send curriculum vitae and names of three references to: **Dr. C. J. Flickinger, Department of Anatomy and Cell Biology, Box 439, University of Virginia Health Sciences Center, Charlottesville, VA 22908.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE:

A full-time position is available immediately to work in the molecular biology and biosynthetic aspects of extracellular matrices with emphasis on basement membrane. The major area of interest is diabetes-induced alterations relevant to long-term complications. Candidates should have a strong background in biochemical and molecular biology techniques and a demonstrated capacity for independent problem solving. Please, submit curriculum vitae and relevant supportive material to: **Mr. David Shepherd, CFP-5, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202.**

POSTDOCTORAL RESEARCH ASSOCIATE

position available immediately for study of intestinal ion transport using intact tissue, whole cells and membrane vesicles. Recent Ph.D. in physiology or biochemistry preferred. Applicants should send curriculum vitae and names of three references to: **Dr. Henry J. Binder, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE IN HISTOPATHOLOGY. Position available January 1989 to study malaria parasite invasion of liver, and inflammatory response to parasite by immunized rodents. Requires experience in immuno-histopathology; parasitology background not necessary. (An electron microscope is available.) Send curriculum vitae and names of three references to: **Dr. Jerome Vanderberg, Department of Medical and Molecular Parasitology, New York University School of Medicine, New York, NY 10016.**

POSTDOCTORAL RESEARCH IN MOLECULAR CELL BIOLOGY—Opening to join a team developing and using new techniques for studying the molecular interactions involved in the regulation of gene expression during cell growth and differentiation in mammals at the Fox Chase Cancer Center. Fox Chase is one of the most progressive biomedical research centers and is located in the beautiful suburbs of Philadelphia. Candidates with a good background in protein or nucleic acid chemistry should send their curriculum vitae and three references to: **Dr. Alfred Zweidler, The Institute for Cancer Research, 7701 Burholme Avenue, Philadelphia, PA 19111.** *The Center is an Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position available in spring of 1989 for a minimum of 2 years to study the molecular biology and biochemistry of red blood cell membrane skeletal proteins. Project involves study of cDNA sequence, expression, functional domains and non-erythroid analogues of major membrane proteins in normal and abnormal red cells. Experience in molecular biology highly desirable. Opportunity to join an established group working on a wide range of membrane and cytoskeletal phenomena in new, well-equipped laboratories. Salary range is \$23,000 to \$32,000 per year, depending upon qualifications and experience. Possibility of faculty appointment at Tufts University School of Medicine for experienced applicants. St. Elizabeth's Hospital is a major tertiary care/research institution centrally located in Boston, and has a strong commitment to the support and growth of biomedical research. Send curriculum vitae with the names and telephone numbers of two or three references to: **Carl M. Cohen, Ph.D., Department of Biomedical Research, St. Elizabeth's Hospital, Box 134, 736 Cambridge Street, Boston, MA 02135.** *Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES BIOMEDICAL MASS SPECTROMETRY

Postdoctoral positions are available for projects related to drug metabolism and the role of arachidonic acid metabolism in nutrition and renal disease. Applicants should have experience in mass spectrometry and possess a Ph.D. in biochemistry, chemistry, or pharmacology. Excellent facilities are available, including five quadrupole mass spectrometers and two double focusing instruments. Applicants should send curriculum vitae and arrange for three letters of recommendation to be forwarded to: **Dr. I. A. Blair, Department of Pharmacology, Vanderbilt University, Nashville, TN 37232.** *Vanderbilt University is an Equal Opportunity Employer.*

RICE UNIVERSITY

POSTDOCTORAL RESEARCH POSITION

For studies of regulation of sterol synthesis. Experience in mammalian cell culture and/or metabolic and bioanalytical studies of sterols and related compounds desirable. Salary dependent on qualifications and experience. Send résumé with names of references to: **G. J. Schroeffer, Jr., Department of Biochemistry, Rice University, P.O. Box 1892, Houston, TX 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION—

Postdoctoral training position in the molecular cell biology of clathrin-coated membranes. Focus is on the regulation of coat assembly in cells and on coat-membrane receptor interactions in endocytosis. Experience in protein chemistry or molecular biology preferred but not required. Send curriculum vitae and names of three references to: **Dr. James H. Keen, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, Philadelphia, PA 19140.** *An Equal Opportunity/Affirmative Action Employer.*

PIONEER ENDOWED PROFESSORSHIP

Iowa State University seeks a plant molecular biologist/geneticists to conduct research in the molecular biology of maize or a model plant. The individual will interact with an ISU plant science group, including geneticist and breeders and molecular biologists/geneticists. The individual will have generous space in a new 125,000-square-foot molecular biology building now under construction, and have access to a large collection of superior quality germplasm and genetic stocks. The individual's research program will receive generous start-up funds and annual interest income from a \$1-million Pioneer Hi-Bred endowment. The academic level of the appointment will depend on the qualifications of the successful candidate. Department affiliation(s) and teaching responsibilities will be determined by the interest and expertise of the individual and the needs of the university. Send curriculum vitae, a description of current research activities, and three letters of reference to:

**Alan G. Atherly
Department of Genetics
8 Curtiss Hall
Iowa State University
Ames, IA 50011**

POSITIONS OPEN

PRINCIPAL RESEARCH BIOLOGIST to investigate interactions of myocardial cells in culture; do Interleukin-1 receptor assays on tissues; clone and identify nonmuscle cells; determine myocardial cell function; identify mediators; develop and maintain cell cultures; write, budget and administer grants. Requires bachelors in biochemistry or biology; 1 year of experience as research biologist and 1 year of training as laboratory biologist. Salary: \$16,621 year; 8 a.m. to 5 p.m. Portland, Oregon. Résumé to: **Employment Division, Job Order #2120472, 875 Union N.E., #201, Salem, OR 97311.**

PROTEIN CHEMIST—postdoctoral or junior faculty level—dual appointment, McLean Hospital/Harvard Medical School. To interface with protein chemistry facility and coordinate protein analytic studies within a multidisciplinary molecular and cell biology laboratory. Research involves the role of posttranslational protein modification in regulating the dynamics of cytoskeleton and membrane proteins in neurons and other cellular systems. Experience in one or more of the following areas is required: enzymology, especially involving proteases, protein/peptide HPLC, FPLC, protein sequencing, protein separation and analytic techniques. Please send curriculum vitae and references to: **Ralph Nixon, M.D., Ph.D., Mailman Research Center, McLean Hospital, Belmont, MA 02178.**

RESEARCH ASSISTANT to work on landscape pattern/wildlife relations in the managed forests of the Oregon Coast Range. Minimum qualifications: M.S. in wildlife ecology or closely related field, with experience in landscape ecology, statistics, computer programming, and/or Geographic Information Systems. Salary: \$17,500 to \$19,500 per annum. Position full-time for 1 year, subject to renewal thereafter based on continued support. Send letter of application, résumé, transcripts, and three letters of recommendation by 30 November 1988 to: **Dr. Andrew Hansen, Coastal Oregon Productivity Enhancement Program, Hatfield Marine Science Center, Newport, OR 97365.** *An Equal Employment Opportunity/Affirmative Action Employer. Complies with Section 504 of Rehabilitation Act 1973. OSU has a policy of being responsive to needs of dual-career couples.*

RESEARCH ASSISTANT OR RESEARCH ASSOCIATE PROFESSOR faculty position in the Division of Hematology-Oncology, Department of Medicine and Comprehensive Cancer Center involved with studies of immune modulations in cancer patients. Major funding from the National Cancer Institute available to fund collaborative team of clinical investigations and laboratory studies relevant to IL-2, lymphokines, and monoclonal antibodies. Please send curriculum vitae and reference letters to: **Albert F. LoBuglio, M.D., Director, Division of Hematology-Oncology and Comprehensive Cancer Center, University of Alabama at Birmingham, UAB Station WTI 237, Birmingham, AL 35294.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE to conduct basic research on lipid metabolism in diabetic rat sciatic nerve. Minimum qualifications required: Ph.D. in biochemistry; at least 3 years of postdoctoral experience including a minimum of five publications in fatty acid and phospholipid chemistry and analysis, preparation of subcellular membranes, kinetics of membrane bound enzymes, and the effects of aging and chronic disease on lipid metabolism. Salary: \$25,500 per year. Curriculum vitae and three references should be sent to: **Sara Springmeyer #8-146, Minnesota Department of Jobs and Training, 390 North Robert Street-Room 124, St. Paul, MN 55101.**

RESEARCH ASSOCIATE to conduct basic research on lipid metabolism in diabetic rat sciatic nerve. Minimum qualifications required: Ph.D. in biochemistry; at least 3 years of postdoctoral experience including a minimum of five publications in fatty acid and phospholipid chemistry and analysis, preparation of subcellular membranes, kinetics of membrane bound enzymes, and the effects of aging and chronic disease on lipid metabolism. Curriculum vitae and three references should be sent to: **H. H. O. Schmid, Ph.D., The Hormel Institute, University of Minnesota, 801 16th Avenue N.E., Austin, MN 55912,** and should be received by 15 December 1988. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

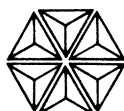
BIOANALYTICAL CHEMIST

The Bristol-Myers Pharmaceutical Research and Development Division in Syracuse has an excellent career opportunity for a chemist, biochemist or medical technologist who can perform with minimal direction in key experimental areas.

The selected candidate will be responsible for implementation and optimization of the analysis of monoclonal antibodies and other genetically derived products. This will include developing enzyme and immunoassays and electrophoretic techniques as well as providing analysis, evaluation and interpretation of experimental results as the basis for oral/written reports.

To qualify, you'll need a BS or MS in Biochemistry, Chemistry or Medical Technology with experience in immunoassays, genetic assays and electrophoresis.

We offer a competitive salary, comprehensive benefits and a working environment conducive to professional development. For prompt, confidential consideration, we invite you to forward a resume with salary requirement to:



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**BRISTOL-MYERS COMPANY
RESEARCH AND
DEVELOPMENT DIVISION**

P.O. Box 4755
Syracuse, New York 13221-4755
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PHARMACOLOGIST

The ICI Pharmaceuticals Group, which includes Stuart Pharmaceuticals and ICI Pharma, is one of the fastest-growing producers of quality pharmaceuticals in the United States.

We have an excellent opportunity for a Pharmacologist at our state-of-the-art laboratories in Wilmington, DE, to work in *in vitro* tests using isolated tissues for characterization of pharmacological activity of compounds. Familiarity with receptor function and electrolyte transport and membrane pharmacology/physiology is preferred. Knowledge of epithelial tissues desirable. BS/MS in biological sciences or related disciplines is required.

We offer an excellent salary and benefits program with opportunities for professional growth.

Please send your resume including salary requirement, in confidence, to:

Paul S. Flynn
ICI Pharmaceuticals Group
Wilmington, DE 19897



**Pharmaceuticals
Group**

An Equal Opportunity Employer M/F.

RESEARCH ASSOCIATE/ EXPERIMENTAL PATHOLOGY

Amgen is a dynamic and growing organization producing products for human health care through applied biotechnology. Our continued growth and development has created an immediate opportunity for a Research Associate in our Experimental Pathology Group. Responsibilities for this position will include management of a full service histology laboratory.

Qualified applicants must have a BS or MS in Cell Biology, Immunology, or a Histology-related discipline with a minimum of 2 years' research or clinical laboratory experience. (An interest in IN VITRO and IN VIVO models of growth factor mediated tissue repair and inflammation is also desirable).

Specific knowledge of all routine histologic procedures is necessary. Experience in procedures involving immunohistochemistry and IN SITU hybridization is desirable.

Amgen offers a stimulating and challenging research environment as well as an excellent compensation and benefits package. Our location, about an hour northwest of Los Angeles, offers the best in Southern California living.

Interested candidates with the required background should send a resume, including references, in confidence to:

Recruitment, Dept. #320
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal Opportunity Employer

AMGEN

RESEARCH INVESTIGATOR VIROLOGY

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel therapeutic agents for the treatment of infectious disease. We currently have an exceptional opportunity available for a research scientist to join an established Virology Department with an emphasis on mechanisms of herpesvirus replication and antiviral research.

You will be responsible for establishing a basic research project dealing with influenza virus replication with the goal of identifying selective antiviral drugs. You will be expected to interact with both the synthetic chemistry and natural products screening groups in order to carry out your research objectives.

Qualified candidates will have a Ph.D in Molecular Virology/Biochemistry and a minimum of 2 years postdoctoral experience in influenza or related research.

For confidential consideration please send your curriculum vitae to **Squibb Institute for Medical Research, Human Resources Department 119, P.O. Box 4000, Princeton, NJ 08543.**



SQUIBB

POSITIONS OPEN

RESEARCH ASSOCIATE AND POSTDOCTORAL POSITIONS available to study insulin and growth factor action. Focus on receptors, tyrosine kinase function, receptor turnover and internalization and molecular biology of growth factor and receptor regulation. Salary as per M.R.C. Canada scale. Send curriculum vitae and names of three references to: **Dr. Barry I. Posner, Polypeptide Hormone Laboratory, Strathcona Medical Building, McGill University, Montreal, Quebec H3A 2B2.**

RESEARCH ASSOCIATE POSITION in the cell and molecular biology of clathrin coated membranes available in the Fels Institute for Cancer Research and Molecular Biology. Focus is on aspects of protein-protein and protein-membrane interactions within the coat structure and regulation of coat assembly in cells. Experience in protein biochemistry or molecular biology required. Send résumé and names of three references to: **Dr. James H. Kean, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, Philadelphia, PA 19140. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH INVESTIGATOR. Design and synthesize novel compounds leading to potential new sweetener products in an assigned area using modern principles of organic chemistry including major reliance on computer modelling; design practical synthetic routes to target compounds; identify structure of synthesized materials using relevant techniques; analyze properties of target compounds by applying implications and limitations of testing results; synthesizing additional derivatives after preliminary results are obtained; serve as consultant to other technical personnel; applies for patents and publishes appropriate research. Ph.D. in organic chemistry or microbiology required together with 1 year and 6 months of experience in the job offered or 1 year and 6 months of experience as a postdoctoral research associate or scientist. Industrial or academic research must have involved the synthesis of photoaffinity labeling spermine and spermidine and unsaturated and nonmetabolizable polyamines as demonstrated by at least one publication. Forty hours: Monday/Friday, 9 a.m. to 5 p.m., \$43,000 per year. Send résumé and Social Security number to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Mrs. Robert S. Felton, Reference #V-IL 8622-F, An Employer paid ad.**

RESEARCH SCIENTIST: Ph.D. with experience in virus enzyme biochemistry to work on modes of action of antiviral agents. Research will be geared toward pre-clinical drug development. Individual will work independently and will supervise one to two technicians. Salary range: \$33,000 to \$37,000 per year. Interested candidates should send curriculum vitae and names of three references to: **Dr. Donald Smee, NARI/ICN Pharmaceuticals, 3300 Hyland Avenue, Costa Mesa, CA 92626. An Equal Opportunity Employer M/F.**

RESEARCH SCIENTIST to work in Hampton, Virginia. Duties involve development of realistic equations of state for simulation of flow fields in nuclear detonation. Experience in the modelling of aircraft flow fields for stability calculations a must. Knowledge of existing codes like NAPDA and of computer graphics is desirable. The candidate must have a Ph.D. in physics and 1 year of experience. The job carries a compensation of \$673 per week on a 40 hours per week; 8:00 to 4:30 schedule. To apply mail résumé with copy of this advertisement to: **Virginia Employment Commission, Attention: Michael Hotchkiss, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502. JO# VA8101753.**

SENIOR STAFF ASSOCIATE—Ph.D. required. The Department of Ophthalmology at Columbia University is seeking a biochemist with expertise in retinoid biochemistry and the identification of proteins unique to vision. Experience with modern analytical instrumentation; detergent solubilization of membrane proteins and the ability to construct and screen cDNA libraries. Send curriculum vitae to: **Dr. P. Gouras, Department of Ophthalmology, Columbia University, 630 West 168 Street, New York, NY 10032. Columbia University takes Affirmative Action to ensure Equal Opportunity.**

POSITIONS OPEN

RESEARCH TECHNICIAN: Consider a career in academic research at Memorial Sloan-Kettering Cancer Center. Candidates who have demonstrated competencies in the biomedical sciences are invited to submit a resume/correspondence for review. Expertise in one or more of the following areas is preferred: recombinant DNA technology, blotting techniques, gels, biochemical instrumentation, immuno-assay work, long-term tissue culture work, or hybridoma technology. B.S./B.A. in the life sciences required. We offer an excellent compensation package, a state-of-the-art environment, and a superb opportunity for career development. Please send correspondence to: **E. L. Kleinert, Employment Department #706, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. Equal Opportunity Employer, M/F/H/V.**

SENIOR SCIENTIST I

Sandoz Crop Protection, a company widely recognized for excellence in agricultural research and manufacturing, has an opening for a Senior Scientist I in biological development. The function of his position will involve responsibilities that focus on the development evaluation of new microbial formulations.

Requirements include an entry-level Ph.D. or M.S. degree in chemical engineering or physical chemistry with some course work in microbiology and 2 to 7 years of experience in the development and scale up of microbial processes.

For consideration apply at or send résumé to: **Sandoz Crop Protection, Zocon Research Institute, 975 California Avenue, Palo Alto, CA 94304-1104. Affirmative Action/Equal Opportunity Employer.**

TENURE-TRACK POSITION MOLECULAR GENETICS

The Division of Basic Medical Sciences, Mercer University School of Medicine, is seeking applicants for a tenure-track assistant/associate professor in the area of molecular genetics. Requirements include training and postdoctoral experience in molecular genetics, and a strong record of research funding or potential for research funding. The appointee is expected to participate in the problem-based teaching of medical students and to develop an independent research program with a molecular orientation in some area of medical genetics. The Mercer School of Medicine has a tradition of interactions, both at the instructional and research levels, among the diverse basic scientists and the clinical units. Recruitment will continue until the position is filled. Applicants should submit a complete curriculum vitae, including names of three references and a description of research interests, to: **Dr. Robert Moon, Chairman, Division of Basic Medical Sciences, Mercer University, Macon, GA 31207. Mercer University is an Equal Opportunity/Affirmative Action Employer.**

THEORETICAL PARTICLE PHYSICIST

The Department of Physics and Astronomy, Johns Hopkins University, invites applications for a tenure-track faculty position in theoretical physics. The successful candidate is expected to conduct research in the area of theoretical particle physics/quantum field theory. Theoretical research in the Department is being conducted within the framework of the Theoretical Interdisciplinary Physics—Astrophysics Center (TIPAC) and it includes particle physics, condensed matter physics, astrophysics and atomic physics. Applications should be sent to: **Professor J. C. Walker, Chair, Department of Physics and Astronomy, The Johns Hopkins University, 3400 North Charles Street, Baltimore, MD 21218.**

Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer

TOXICOLOGIST, ENVIRONMENTAL. West Coast environmental consulting firm seeks Ph.D. in toxicology or related field with at least 2 years of experience in conducting risk assessments at federal superfund sites. Candidate should have excellent communication skills. Excellent benefits, competitive salary in pleasant Bay Area location. Send résumé with salary history to: **Dr. Ronald Block, Aqua Terra Technologies, 2950 Buskirk Avenue, Suite 120, Walnut Creek, CA 94596. An Equal Opportunity Employer.**

POSITIONS OPEN

Louisiana State University (LSU) Eye Center is looking for a **SENIOR PHARMACOLOGIST.** Applicant should be interested in drug delivery systems although other areas of research will be considered.

Previous experience in ophthalmology not necessary. Interested applicants send curriculum vitae to: **Herbert E. Kaufman, M.D., LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, LA 70112. LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.**

SENIOR STAFF INVESTIGATOR

Applications are invited for a full-time research position in the Renal Research Program, Department of Medicine. The position involves research in the broad areas of extracellular matrix biology. Applicants must have a demonstrated strong motivation toward creative research and ability for independent work. Candidates must possess a Ph.D. or M.D. degree and substantial experience in the molecular biology and biochemical aspects of collagen/proteoglycan biosynthesis. Excellent facilities and support, including institutional funding are available. Please submit curriculum vitae and reprints of most recent significant publications to: **Mr. David Shepherd, CFP-514, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202.**

TENURE-TRACK ATMOSPHERIC DYNAMICS with interest in interdisciplinary research and teaching is sought by the Department of Environmental Sciences. Climate-ecosystem dynamics, boundary layer and chemical interactions and coastal storm studies are areas of particular interest. Curriculum vitae, statement of research goals and addresses of three referees should be sent to: **Dr. William E. Odum, Chairman, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, VA 22903. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.**

DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE PHILADELPHIA, PA 19104

TENURE-TRACK POSITION in neuropathology is available as of September, 1989. Individuals with training in diagnostic neuropathology and research should apply to **Nicholas K. Gonatas, M.D., 436 Johnson Pavilion/6079, University of Pennsylvania School of Medicine, Philadelphia, PA 19104. Telephone: 215-662-6695. Rank of appointment will be commensurate with training and experience. The University of Pennsylvania is an Equal Opportunity Employer.**

AWARDS

GRADUATE STUDENT RESEARCH AWARDS, Ecology and Environmental Policy. The Science Division of the National Audubon Society invites applications for graduate student research support in **ecology and environmental policy.** Candidates should be at an early stage in their doctoral program. Applications in two general areas are especially encouraged: 1. Field work on ecological processes with broad relevance to the management of National Audubon Society sanctuaries and other managed lands, for example on hydrological cycles, nutrient limitation, prescribed burning, or grazing impacts on natural communities; 2. Policy analyses of emerging national environmental issues, for examples on the role of electric vehicles in moderating global climate changes, implications of biotechnology for land-use, using the permit-review process as a conservation tool, or comparing the conservation implications of food irradiation vs. pesticides. These grants are part of an ongoing effort to expand the Society's scientific scope, therefore, proposals for ornithological research are ineligible for funding under this program. Approximately three grants of up to \$6000 apiece will be awarded. These grants will be renewable for a period of 2 to 3 years. In addition, a number of smaller, one-time grants may be awarded. Field research on Audubon sanctuaries may also be eligible for some on-site logistical support. Application guidelines may be obtained by writing: **Robert T. Lester, Graduate Student Research Awards, National Audubon Society, 950 Third Avenue, New York, NY 10022. Completed applications are due by 15 February 1989. Winners will be announced by early May.**

**C
MRC GROUP IN PROTEIN STRUCTURE AND FUNCTION
M**

University of Alberta, Edmonton

FACULTY POSITION IN PROTEIN CHEMISTRY

The Medical Research Council of Canada Group in Protein Structure and Function at the University of Alberta invites applications for a Faculty position in the Department of Biochemistry. Applicants should have a strong background in protein chemistry and will be expected to develop a research project that will complement and contribute to the overall research efforts in the group. Some areas currently under investigation by the Group include: chemistry and structure of contractile proteins of both muscle and non-muscle systems and the molecular mechanism by which calcium triggers muscle contraction; structure-function relationships of calcium binding proteins; mechanistic studies of seryl and aspartyl proteinases through the establishment of their high resolution X-ray structures and protein-nucleic acid interactions as represented by the Cro repressor system. Preference in the selection process will be given to those individuals who have a background in the cloning and expression of novel proteins and are interested in establishing their structure-function relationships. Representative protein systems could include: cytoskeletal proteins, receptors and signal transduction proteins. Appointments can be made at any level from Assistant to Full Professor depending upon the qualifications.

The MRC Group in Protein Structure and Function was established in 1974 and has undergone two successful renewals. The major techniques of protein chemistry are included in the armament used by the group members for the study of protein systems: hydrodynamic and spectroscopic methods, 2D nuclear magnetic resonance spectroscopy, X-ray crystallography protein micro-sequencing techniques, solid phase synthesis of peptides, recombinant DNA and protein engineering.

In accordance with Canada Immigration regulations, priority will be given to Canadian citizens and permanent residents. The deadline for the position is Dec. 31. Applicants should forward *curriculum vitae*, list of publications and names of three referees as soon as possible to Professor C.M. Kay, or Professor L. B. Smillie, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada T6G 2H7.

The University of Alberta is committed to the principle of equity in employment.

Molecular Neurobiology



Faculty Positions



The Ohio State University is expanding its search for faculty at all levels with expertise in gene expression in the nervous system to complement existing strengths in developmental neurobiology, neural plasticity and regeneration, structural chemistry, receptor-mediated events and molecular genetics. The College of Medicine and the Biotechnology Center have designated Molecular Neurobiology as a top priority for development. Three to five tenure track positions at the **Assistant to Full Professor** level are available now at the Ohio State Biotechnology Center, with appointments in appropriate academic departments. At least five additional appointments will be made as the core group develops. Candidates qualified for appointment to Professor may also be considered for the position of Associate Director of the Biotechnology Center.

These positions offer newly remodeled laboratories, start-up funds and the opportunity to participate in the development of new interdisciplinary programs at a University committed to excellence in research and graduate education.

Send nominations, or applications including C.V., a brief statement of research plans, and the names of three references to: Dr. P.E. Kolattukudy, Director, Ohio State Biotechnology Center, 206 Rightmire Hall, 1060 Carmack Road, Columbus, OH 43210-1002. Equal Opportunity/Affirmative Action Employer.

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Biochemist/ Pharmacologist

The Monsanto Agriculture Co. Environmental Health Laboratory in St. Louis, MO has an opening for a biochemist or pharmacologist who will have responsibility for conducting and reporting animal metabolism studies. These programs will usually involve determination of the rates and degrees of absorption, distribution and elimination of the administered test material. Programs may include identification of the major metabolic pathways involved.

Responsibilities include supervision of a team of technicians assigned to these programs. These studies are conducted in a GLP environment. The ideal candidate will have a Ph.D. in biochemistry, pharmacology, toxicology or a closely related field with 0-5 years' experience. A knowledge of radioisotope, animal handling and chromatographic techniques is desirable.

Monsanto provides a generous compensation package relative to your responsibilities and qualifications. Interested candidates, please forward your resume to: **Vernon L. Bozarth; Mail Zone B3NA; MONSANTO COMPANY; 800 N. Lindbergh Boulevard; St. Louis, MO 63167.** An Equal Opportunity/Affirmative Action Employer M/F/H/V.

Monsanto

CONFERENCES

TUMOR CELLS AND THE MICROCIRCULATION: A CONCEPTUAL FRAMEWORK FOR CANCER 8 to 10 January 1989 La Jolla, California

This meeting will explore the interaction between tumor cells and the microcirculation. The working agenda is that cancer cells and their microcirculatory environment are both interdependent and inseparable. By combining sophisticated techniques in micro-circulation with recent advances in cell and molecular biology, new frontiers are highlighted projected.

The role of integrins and vascular adrenergins will be presented in relation to the endothelium and the underlying connective tissue, highlighting the function of attachment sites and growth factors. These elements, and tumor cell pathology and microcirculation will be integrated to create a new perspective on cancer and the inflammatory process.

Speakers and Discussants: **Karl-E. Arfors** (La Jolla), **Michael P. Bevilacqua** (Boston), **Rolando Del Maestro** (London, Canada), **Jeffrey Evelhoch** (Detroit), **Ronald Goldfarb** (Pittsburgh), **Pietro Gullino** (Turin), **Frithjof Hammersen** (Munich), **Ronald Herberman** (Pittsburgh), **Marcos Intaglietta** (La Jolla), **Rakesh Jain** (Pittsburgh), **Brian Leyland-Jones** (Rockville), **Peter Libby** (Boston), **Thomas Maciag** (Rockville), **Konrad Messmer** (Heidelberg), **Michael Palladino** (San Francisco), **David F. Ranney** (Dallas), **Daniel B. Rifkin** (New York), **Erkki Ruoslahti** (La Jolla), **Jeffrey Schlom** (Bethesda), **Bruce Zetter** (Boston), **Benjamin W. Zweifach** (La Jolla).

Conference will be held at La Jolla Cancer Research Foundation, La Jolla, California, 8, 9, and 10 January 1989. Registration fee: \$175.00 per person (meals included; hotel extra). Send inquiries to:

Marcos Intaglietta, Ph.D.
Department of AMES, R-012
University of California, San Diego
La Jolla, CA 92093

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FELLOWSHIPS

The newly formed DEPARTMENT OF CELL BIOLOGY DUKE UNIVERSITY MEDICAL CENTER

announces the availability of several fully-funded FELLOWSHIPS for graduate study leading to the Ph.D. degree. Research opportunities are available in areas of cell biology, structural biology, and in the Division of Physiology. The University Program in Cell and Molecular Biology provides additional fellowships and interdepartmental opportunities. For complete information write to:

Director of Graduate Studies
Department of Cell Biology, Box 3709
Duke University Medical Center
Durham, NC 27710

Affirmative Action/Equal Opportunity Employer.

FELLOWSHIPS—American Museum of Natural History Research/Museum Fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1989. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, mineral sciences, and the field of museum education as its relates to natural history museums or planetariums. Deadline for applications, including Chapman Fellowships (ornithology), is 15 January 1989. Request information booklet and application from: **Office of Grants and Fellowships, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.**

FELLOWSHIPS

USDA-GRADUATE FELLOWSHIP IN FOOD SCIENCE INSTITUTE OF FOOD SCIENCE CORNELL UNIVERSITY ITHACA, NEW YORK

Applicants are invited to apply for a USDA graduate fellowship in food science at Cornell University. The focus of this program is to study the behavior, modification and separation of macromolecules in foods. Candidates who are U.S. citizens with an outstanding undergraduate record and excellent Graduate Record Exam scores will be considered.

The successful candidate will receive a stipend of \$15,000 per year for 3 years in addition to a tuition allowance. He or she will be expected to choose from among the many diverse research programs under the direction of one of the principal participants listed below.

PRINCIPAL PARTICIPANTS

- J. H. Hotchkiss:** Interactions between packaging matrices and food constituents
- J. Regenstein:** Functional properties of poultry and fish meat
- S. S. H. Rizvi:** Supercritical fluid extraction for food applications
- J. W. Brady:** Molecular mechanics studies of carbohydrate solvation
- D. D. Miller:** Effects of processing of the nutritional bioavailability of calcium
- J. E. Kinsella:** Physicochemical properties of food proteins
- C. A. Batt:** Genetic modification of the structure/function of proteins

For further information please contact:

Terry Fowler
Department of Food Science
Stocking Hall
Cornell University
Ithaca, NY 14853
Telephone: 607-255-7637

TRAINING PROGRAM

PRE- AND POSTDOCTORAL FELLOWSHIPS MOLECULAR PARASITOLOGY

The Molecular Parasitology Training Program (NIH) in the Division of Biological Sciences, University of Georgia has immediate openings for pre- and postdoctoral fellows in **Molecular and Cell Biology of Parasites and Vectors**. The program offers training in modern parasitology with emphasis on molecular biology, biochemistry, immunology, cell biology and vectors. Predoctoral candidates have the option of enrolling in the departments of biochemistry, entomology, genetics, microbiology or zoology. *Funding is restricted to U.S. citizens or permanent residents although candidates not meeting these restrictions are also encouraged to apply with the expectation that other funding may be available.* For further information contact: **Rick L. Tarleton, Ph.D., Molecular Parasitology Training Program, Department of Zoology, University of Georgia, Athens, GA 30602. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL TRAINING OPPORTUNITIES are regularly available with the College of Biological Sciences at the University of Minnesota. Inquiries may be directed to the Departments of Biochemistry, Ecology and Behavioral Biology, Genetics and Cell Biology, and Plant Biology, as well as the following research programs: Bell Museum of Natural History, Biological Process Technology Institute, Cedar Creek Natural History Area, Gray Freshwater Biological Institute, the Lake Itasca Forestry and Biological Station, and the Plant Molecular Genetics Institute.

For information about possible openings in these programs, please write to (include curriculum vitae and specify departments of interest):

University of Minnesota
College of Biological Sciences
123 Snyder Hall
1475 Gortner Avenue
St. Paul, MN 55108

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

PROGRAM

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For further information and detailed registration forms please contact:

Dr. William Hansel
Department of Physiology
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New York State College of Veterinary Medicine
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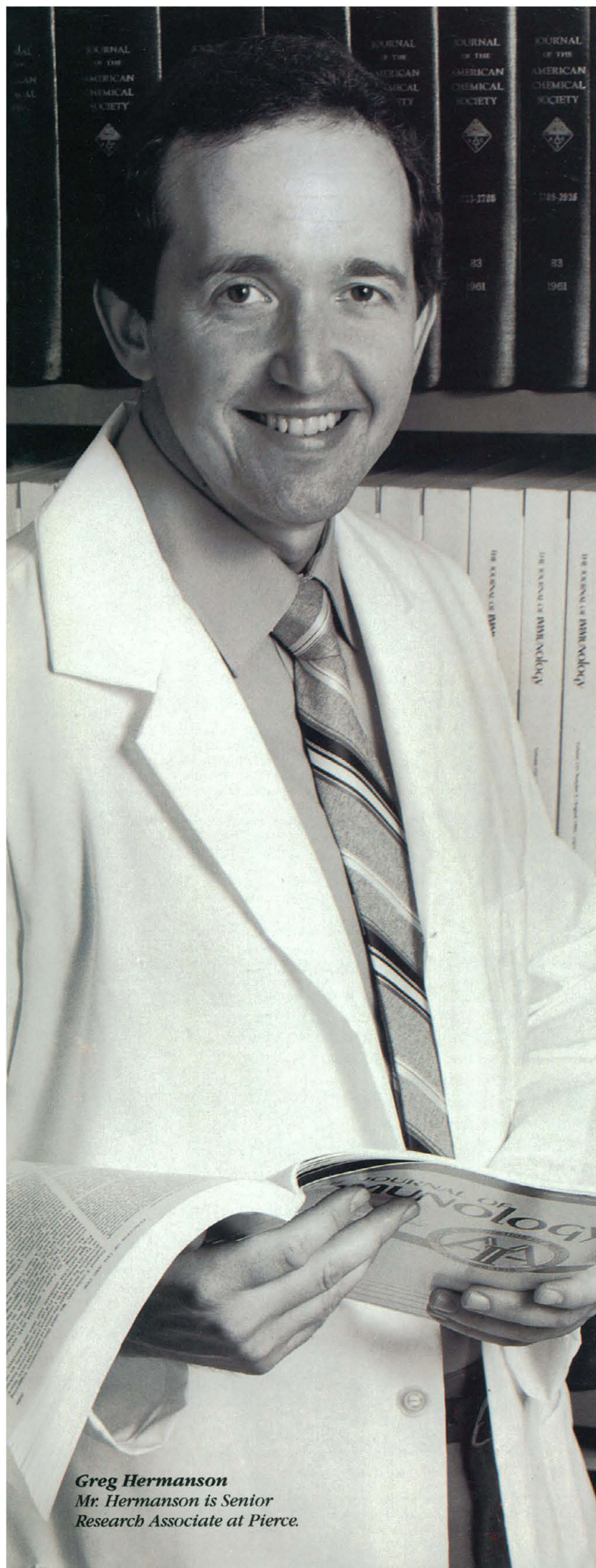
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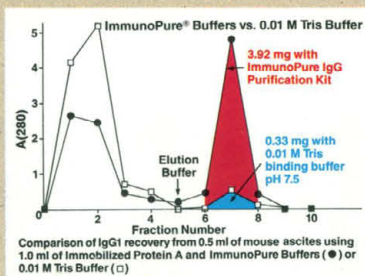
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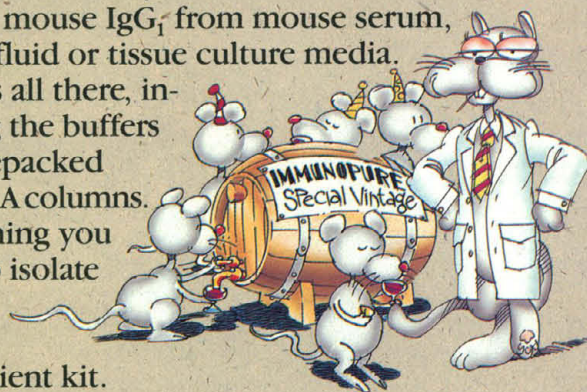
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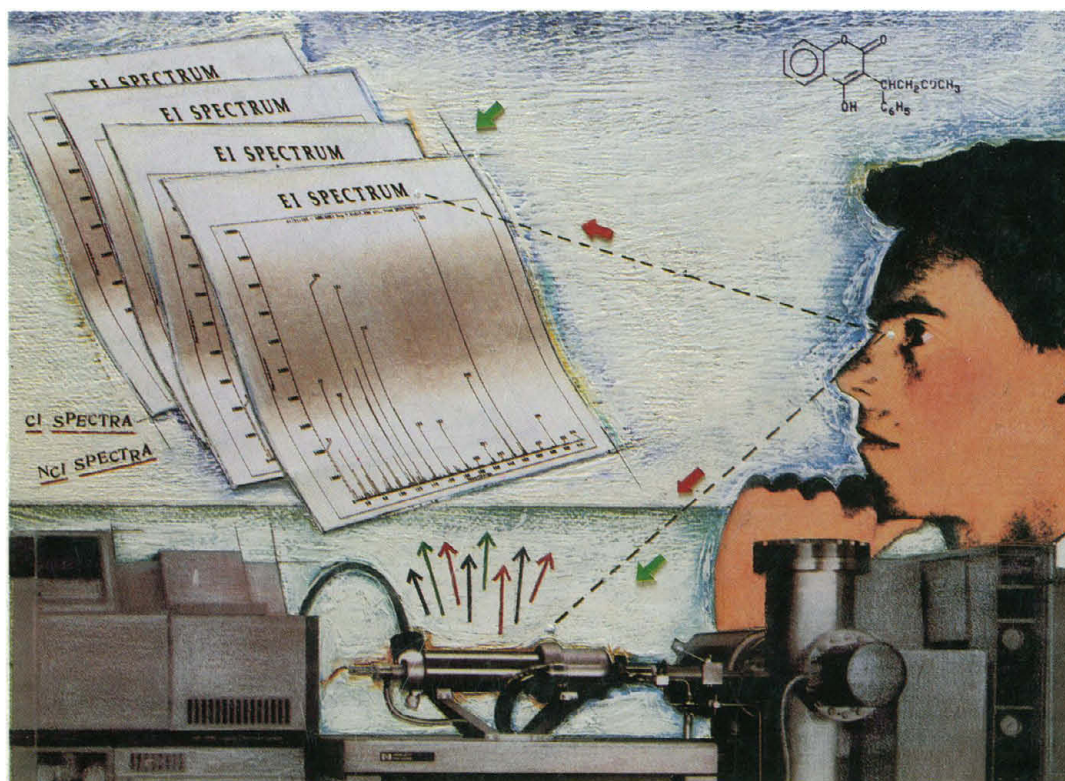


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