

Cell Culture Device

Cellift is a benchtop, airlift fermentor for mammalian cell culture. It is disposable and sterile. Cellift may be used in a batch culture or in a continuous-feed mode by means of an infusion device. Cultures may be maintained for extended periods of time with high yields. Positive-pressure operation reduces the risk of contamination. The device has no moving parts and may be operated on a benchtop with an optional heating jacket. Cellift is constructed of transparent polystyrene and offers a 650-ml capacity. Ventrex Laboratories. Circle 591.

Spectrofluorometer

Model FP-770 features $f/2.5$ optics and scanning from 200 to 850 nm at 1000 nm/min. A data station provides functional keys for user interaction and control. Dedicated software offers integral diagnostics and a 19-function range of luminescence spectroscopy. The sample compartment is large enough for a full line of sample-handling accessories and it is easily accessible. The dual-beam has a reference photomultiplier system corrected for fluctuation of light source and offers wavelength accuracy of ± 1.5 nm and repeatability to within 0.3 nm. The xenon source is sealed. There is an RS-232C port available for data communication. Jasco. Circle 598.

Software to Teach Measurement

Techniques of Measurement is an interactive software package for Apple computers. It instructs students of physical science how to read common laboratory instruments, record data properly, round off calculations, and other laboratory skills. Part I, Recording Data, includes linear scales, graduated cylinders, burettes, and top-loading balances. Users learn to interpret scale divisions. Part II, Significant Figures, reviews

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 (on pages 798A and 870A) and placing it in a mailbox. Postage is free.

the rules of obtaining reliable calculations by rounding off instrument readings to the correct number of digits. Part III, Precision and Accuracy, explores the uses of these concepts in terms of average deviation, relative deviation, and percent error. Each part includes exercises. Ohaus Scale. Circle 599.

Test-Tube Electrode

A combination electrode with Calomel reference half-cell is small enough to fit inside test tubes used in biomedical and scientific laboratories. The Futura II Calomel Combination Electrode, part number 39525, features a saturated potassium chloride fill solution. This substance does not react with biological and metallic samples or buffers including biological injectables, halogens, chromate, protein, sulfide, and tris buffer. These electrodes are warranted for 1 year and they are refillable. Beckman Instruments, Scientific Instrument Division. Circle 601.

Motion Analyzer

ExpertVision is an integrated computer system that analyzes motion. It is designed for biomechanical applications. It combines real-time data collection, analysis, and reporting in automated system. It converts live or video images to statistics and graphic data that may be manipulated. ExpertVision eliminates marker "dropout"; it uses noninvasive, passive markers; it offers variable camera placement; it provides a videotape record of each analysis; and it is programmable. It analyzes motion in two or three dimensions on a high-speed graphics workstation or on a personal computer. ExpertVision will operate from standard 60 frames per second up to 2000 frames per second. Motion Analysis. Circle 600.

Gas Cylinder Switch

Bio-Switch is an automatic device to switch flow from a depleted cylinder to a full one for continuous use. It functions with any nonflammable gas (user must specify gas to be used). Bio-Switch monitors cylinder pressures internally and may be used with any delivery pressure up to 150 psi. When a cylinder is depleted, an alarm sounds and the switch is made. Front panel controls allow the user to specify which cylinder to draw from and an easily seen indicator displays which cylinder is in use. Bio-Switch is supplied complete with sensors, cables, tubing, and fittings. Tekmar. Circle 596.

Protection for Centrifugists

Beta Blok protects fingers and hands from overexposure to beta radiation from isotopes such as phosphorus-32. Beta Blok is made from a solid block of acrylic plastic. It effectively attenuates beta radiation to a less harmful amount. Each Beta Blok will accommodate four 1.5-ml or three 0.25-ml microcentrifuge tubes. The entire device with tubes may then be moved from place to place in the laboratory without excess handling of the individual tubes. Research Products International. Circle 597.

Glove Box

The Economy Glove Box is constructed of Plexiglas II-UVA for strength, visibility, and its ability to resist most inorganic solutions, oils, low concentrations of alcohol, paraffinic and olefinic hydrocarbons, amines, alkyl monohalides, and esters containing more than ten carbon atoms. It features side entry (11 $\frac{3}{4}$ inches in diameter) for connection of accessories. The 8-inch circular front ports will accept standard gloves or the Iris Port, a bare-hand entry. An air-lock accessory is available. A coupling sleeve permits linking of glove boxes in series. Manostat. Circle 595.

Literature

Electrophoresis apparatus and techniques are detailed in a catalog. Exercises are presented to teach protein separation, separation in continuous and discontinuous buffers, isoelectric focusing, DNA hybridization, and more. Hoefer Scientific Instruments. Circle 605.

Rare and Fine Chemicals describes hundreds of materials for scientific research and biomedical and analytical applications. There are special sections on products for chromatography and surfactants. ICN Biomedicals, K & K Labs Division. Circle 606.

Photonics is a short-form catalog that offers 11 detectors, 2 light sources, linear image sensors, and streak cameras. Hamamatsu. Circle 607.

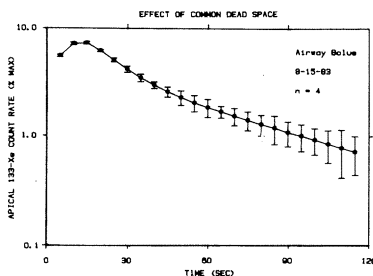
Visible Speech offers the Micro Speech Lab, a computerized speech tool for a variety of teaching and research applications. Software Research. Circle 608.

Recorder is devoted to the Linear-8, a device for chart recording temperature in the field laboratory. Dickson. Circle 609.

IBM PC Enhancement Handbook describes data acquisition and instrumentation systems for scientists and engineers. CyberResearch. Circle 610.

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SCIENCE

Posters

The following posters of *Science*
covers are available:

30 March 1979, Tropical flowering
tree;

23 February 1983, Landsat photo
of Detroit, Michigan;

29 July 1983, Cheetah;

2 December 1983, Snowshoe
hare;

23 December 1983, Cathedral
window/DNA molecule.

Combination of space covers in
scroll format: 1 June 1979, 23 No-
vember 1979, 10 April 1981.

Price is \$5 each (prepaid).

Write to AAAS, Department POST,
1333 H Street, NW, Washington,
D.C. 20005.

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.

LINE CLASSIFIED ADVERTISING DEADLINES:

14 March issue (mailed 7 March): **21 February**
21 March issue (mailed 14 March): **28 February**
28 March issue (mailed 21 March): **7 March**
4 April issue (mailed 28 March): **14 March**

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 DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$13.00 per millimeter; \$325 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) 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

Biochemist/Neurochemist. Ph.D., 7 years of research experience in receptor and tissue culture work; seeks position immediately. Box 29, *SCIENCE*. 2/21, 28

Biotechnology/Business. B.S. chemical engineering with biotechnology minor (1983), M.B.A. with finance, marketing, and operations concentrations (1986). Biotechnology research, engineering, and business experience. Seeks highly challenging position demanding innovative, analytical, and managerial talents. Box 16, *SCIENCE*. X

Cytogeneticist. Ph.D. Extensive experience in meiotic and mitotic chromosome analysis, cell and embryo culture, and spermatogenesis. Directed human cytogenetics laboratory. Available immediately. Box 27, *SCIENCE*. 2/21, 28

Immunologist. Ph.D. Experienced research scientist with background in university and industrial R&D in cellular immunology, lymphokines, and hybridoma/monoclonal antibody technology. Expert tissue culturist with excellent publications and references. Seeking position in industry or academia. Box 17, *SCIENCE*. X

Immunologist/Entrepreneur. Ph.D. Extensive research experience; immunology/immunochemistry, FDA/USDA regulatory affairs and patents. Seeks start-up biotechnology company. Box 18, *SCIENCE*. X

Scientific Consultant. Evaluation of biomedical preclinical and clinical studies for the pharmaceutical industry. Litigation support. Patent documentations. FDA applications. Biotechnology ventures. Ph.D. biochemistry, immunology, physiology, and cancer research. International experience. Foreign languages. Box 19, *SCIENCE*, or telephone: 301-229-4489.

2/21; 3/7, 3/14

POSITIONS WANTED

Ceramic Engineer—Bioceramics; investment casting, coatings. Box 28, *SCIENCE*. X

POSITIONS OPEN

ACADEMIC POSITION

Assistant Professorship in Biochemistry and Molecular Biology. The Department of Biochemistry and Molecular Biology, University of North Dakota School of Medicine, invites applications for a tenure-track position at the assistant professor level. A Ph.D. or M.D. degree and postdoctoral experience, publications, and ability to obtain extramural research support are essential. Some teaching experience, preferably at the medical school level, is highly desirable. The individual must have a strong interest in medical and graduate education and in conducting an independent research program. Duties will include teaching of medical, graduate, and undergraduate students; conducting independent research; and service on committees. Preference may be given to individuals with an orientation to molecular biological aspects of biochemistry, but others also are strongly urged to apply. Salary is negotiable based on credentials. Prior to 15 May 1986, applicants should submit their curriculum vitae, including publications and present and proposed research plans, and cause three letters of reference to be sent to: **Dr. Robert C. Nordlie, Chairman, Department of Biochemistry and Molecular Biology, University of North Dakota School of Medicine, Grand Forks, ND 58202.** The University of North Dakota is an Equal Opportunity Employer.

AGRICULTURAL BIOTECHNOLOGY CAREER OPPORTUNITIES IN ISRAEL

ABI—Associated Biotech Industries, an Israeli/American joint venture in agricultural biotechnology, has established a new biotechnology division. This division will be concerned with developing novel plant propagation procedures, specific pathogen free plants, and new varieties of ornamental, vegetable, and plantation crops.

Positions are available for M.Sc. and Ph.D. level scientists with training in any of the following:

- Plant Tissue Culture
- Plant Pathology
- Plant Molecular Biology

Applicants should submit curriculum vitae, including names of three references to:

Mr. Shlomo Harari, Plant Biotech Industries Ltd., Mobile Post Ashrat 25201, Israel.

ANATOMIST. The Department of Anatomy invites applications for a tenure-track position at the assistant or associate professor level. Qualified candidates must have Ph.D. or M.D. degree, at least 2 years of postdoctoral experience, willingness to teach medical students in at least two anatomical disciplines (with preference for gross- and neuroanatomy), and demonstrated ability to perform independent research. Special (but not exclusive) consideration will be given to neuroscientists and reproductive/cellular biologists. Send curriculum vitae, names of at least three references, and letter specifying teaching interests and research plans by 30 March 1986 to: **Anatomy Search Committee, School of Medicine, Southern Illinois University, Carbondale, IL 62901.** An Affirmative Action/Equal Opportunity Employer.

ASSISTANT OR ASSOCIATE PROFESSOR POSITION IN EXPERIMENTAL PATHOLOGY

Applications are invited for a tenure-track assistant or associate professorship in the Department of Pathology at the Medical College of Virginia/Virginia Commonwealth University. Applicants should have an M.D. or Ph.D. degree and a superior record of postdoctoral training and productivity in basic cancer research. The applicant will be expected to develop a strong, creative research program related to the cellular and molecular pathobiology of neoplasia, as well as participate in graduate and/or medical teaching programs. Applicants should submit curriculum vitae, three letters of reference, and a letter discussing current and future research plans to: **Dr. Alphonse E. Sirica, Department of Pathology, Medical College of Virginia (MCV)/VCU, Box 662 MCV Station, Richmond, VA 23298.** Final filing date is 30 April 1986, or until suitable persons are identified. MCV/VCU is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

AEROSOL PHYSICIST SALARY \$31,619 PER ANNUM

The Environmental Measurements Laboratory of the Department of Energy has an opening in its Aerosol Studies Division for an individual with an M.S., plus 2 years of research experience in environmental/atmospheric aerosols, or a Ph.D. with 1 year of relevant research experience. This position involves research on the basic physical phenomena associated with transport and deposition of atmospheric aerosols. The purpose is to develop data and models for predicting the migration, through the atmospheric pathway, of prescribed radioactive and chemically active materials. The work is interdisciplinary and a degree in any of the physical sciences or engineering is appropriate. Please send a completed résumé to: **Beatrice C. Cassidy, Department of Energy, 376 Hudson Street, New York, NY 10014; telephone: 212-620-3609. Equal Opportunity Employer.**

ASSISTANT PROFESSOR. The Department of Biological Sciences at Wright State University invites applicants for a tenure-track position beginning 1 September 1986. This position requires the development of a two-quarter course in **human anatomy and physiology** for undergraduate majors in biology and allied health, and participation in the overall curriculum at the undergraduate and/or graduate level. The successful applicant will be expected to establish a viable research program. Ph.D., demonstrated successful teaching, and independent research ability are required. Curriculum vitae, statement of teaching and research goals, and three names of references, which may be contacted, must be received by 21 March 1986. Send to: **Arlene F. Foley, Acting Chairman, Department of Biological Sciences, Wright State University, Dayton, Ohio 45435. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR. Applicants are invited to apply for a research assistant professor position in the Department of Biochemistry. Individuals with an M.D. or Ph.D. degree and at least 2 years of postdoctoral experience are eligible. Candidates must have (i) experience and publications in the characterization of acute growth factor receptor regulation by phosphorylation, with evidence of significant original research in growth factor receptor systems; (ii) experience in the use of state-of-the-art instrumentation used for microsequencing proteins and the synthesis of peptides; (iii) experience in the purification of growth factors; (iv) experience in the expression of the cDNA for a receptor in mammalian cells. The successful candidate will be expected to teach biochemistry courses for medical and graduate students, to contribute to the development and organization of departmental courses, and to establish and direct an externally funded research program on the molecular biology, protein chemistry, and function of growth factor receptors. Salary to \$30,000.

Send curriculum vitae, outline of research interests, and the names of three references by 7 March 1986 to:

**Search Committee
Department of Biochemistry
University of Massachusetts Medical School
55 Lake Avenue North
Worcester, Massachusetts 01605
An Affirmative Action/Equal Opportunity Employer**

EASTERN MONTANA COLLEGE ASSISTANT PROFESSOR MICROBIOLOGY

A tenure-track position beginning as assistant professor is available in microbiology starting September 1986. Teaching duties include general and health-related microbiology, biochemistry, and general biology. A Ph.D. in microbiology is required. Submit letter of application, curriculum vitae, transcripts, statement of research interests, and three letters of reference by 4 March 1986. Send application materials to:

**Archie M. Sutton
Personnel Director
Personnel Office
Eastern Montana College
1500 North 30th Street
Billings, Montana 59101-0298**

For additional information, contact: **Search Committee Chairperson: Dr. Gary Bantz; telephone: 406-657-2015.**

Eastern Montana College is an Equal Opportunity/Affirmative Action Employer

Post-Doctoral Investigator Position in Marine Microbiology Available Immediately

Research focuses on microbial and geochemical transformations in deep sea and geothermal sediments. Work will entail microbial enrichments, isolations and physiological experiments involving analyses of inorganic and organic sulfur compounds as well as hydrocarbons. Background in geochemistry desirable.

Send curriculum and names of 3 referees to:

**Personnel Manager
Box 54P**



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RESEARCH SPECIALIST

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**Mary Ann Michini
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POSITIONS OPEN

AFFILIATE ASSISTANT SCIENTIST

Study of the role of adenosine and cellular alkalization in the initiation of sperm motility. Study of development of sperm motility in the mammalian epididymis. Specific areas of work:

Role of intracellular pH in the onset of sperm motility (monitoring) intracellular pH using fluorimetric and other biophysical techniques.

Role of intracellular calcium in sperm function (monitoring) intracellular calcium through uptake of radioactive calcium and calcium sensitive fluorescent probes.

Interrelationship of calcium and cyclic nucleotide levels.

Role of adenosine and its analogues in regulating cyclic nucleotide levels and motility in sperm.

Duties also include grant-writing to help fund position.

Requirements: Ph.D. in biochemistry (Major field of study: Male Reproduction)
M.S. in chemistry
2 years of experience in reproductive biochemistry

40 hours per week (8 to 5) \$610.00 per week

Send résumé to:

Employment Division
Attention: Job Order Number 1997717
875 Union Street N.E., Room 208
Salem, Oregon 97311

ANATOMY AND PHYSIOLOGY

Assistant professor rank; tenure-track position to begin 18 August 1986. Ph.D. required; teaching experience preferred. Primary teaching responsibility is in human anatomy and physiology; other courses in areas of specialization. Send résumé, names, addresses, and telephone numbers of three academic references by 14 March 1986 to: **Robert J. Werth, Ph.D., Department of Biology, Purdue University Calumet, Hammond, Indiana 46323.** *Purdue Calumet is an Affirmative Action/Equal Opportunity Employer.*

The Division of Digestive Diseases, Department of Medicine, seeks applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level in the area of the **PHYSICAL BIOCHEMISTRY OF MEMBRANES**. Candidates should have a strong background in physics, physical chemistry and mathematics, and postdoctoral experience in membrane biochemistry. Candidates must have a record of accomplishment in research. They will be expected to develop an independent research program and to teach at the graduate level. Send curriculum vitae, names of three references, and a statement of directions for future research to:

David Zakim, M.D.
Director, Division of Digestive Diseases
Cornell University Medical College
1300 York Avenue, F-231
New York, New York 10021

California State College, Bakersfield (CSB), is seeking candidates for the following positions: **ASSISTANT OR ASSOCIATE PROFESSOR OF SCIENCE EDUCATION/PHYSICAL SCIENCES** (tenure-track); **ASSISTANT/ASSOCIATE PROFESSOR OF SCIENCE EDUCATION/BIOLOGY** (anticipated, tenure-track); **LECTURER IN ANATOMY/PHYSIOLOGY** (full-time, temporary). Salary range: \$24,168 to \$33,408. For further information/position descriptions, contact: **Dr. Bernard Michals, Chair, Department of Biology, California State College, 9001 Stockdale Highway, Bakersfield, CA 93311-1099.** Application deadline: 7 March 1986. *CSB is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF ANATOMY—The Department of Anatomy of Hahnemann University invites applications for a faculty position with a major responsibility in teaching gross anatomy. Preference will be given to applicants with a record of research productivity as an independent investigator. The area of research is open. Applicants should submit a letter describing teaching experience, research plans, curriculum vitae, reprints, and three letters of reference by 1 March 1986 to: **Peter S. Amenta, Ph.D., Professor and Chairman, Department of Anatomy, Broad and Vine, MS Number 408, Philadelphia, PA 19102.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR—BIOCHEMISTRY

The Department of Biochemistry at Virginia Commonwealth University is seeking applicants for a tenure-track assistant professor appointment. The specific areas of research competence being sought are structure-function of proteins, including membrane assembly, with a strong basis in physical approaches. Other areas of interest are biocatalysis on solid supports or related aspects of biocatalysis and molecular/physical basis of neurobiology. The successful applicant will have demonstrated excellence in research and exhibit strong potential for establishing a superior research program complementary to existing research areas in the department. Candidates will also be judged on their ability to participate effectively in the teaching programs of the department including graduate, health professions, and undergraduate students. A doctoral degree and at least 2 years of postdoctoral experience in biochemistry, molecular biology, chemistry, or a related field is required. Applicants should submit curriculum vitae, a brief description of future research plans, and arrange to have letters of recommendation from three qualified scientists sent to the search committee. Applications should be sent before 1 May 1986 to:

Search Committee
Department of Biochemistry
Box 614 Medical College of Virginia
Virginia Commonwealth University (VCU)
Richmond, Virginia 23298

VCU is an Affirmative Action-Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR—In the Department of Human Oncology at the University of Wisconsin. A highly qualified cancer/molecular cell biologist, Ph.D. is sought for a tenure-track position. This individual should have major research interests and investigative experience in using cell culture systems to study the growth and differentiation in vitro of human epithelial cells and the molecular mechanisms of multistage human carcinogenesis in human epithelial cells. Applicant should have a strong, independent research program, a demonstrated ability to attract extramural support, and teaching experience. The successful applicant for this position will be expected to participate in the departmental teaching and Ph.D. training program. Send résumé, statement of research interests, and the names of three references to: **George T. Bryan, M.D., Ph.D., Associate Director of Laboratory Research, University of Wisconsin, Department for Human Oncology, K4/528 Clinical Science Center, 600 Highland Avenue, Madison, WI 53792.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

Tenure-track **ASSISTANT PROFESSOR** positions are available in the Department of Pharmacology, University of Iowa, College of Medicine. Applications are invited from well-trained individuals who possess the Ph.D. and/or M.D. degree and who are active in an area suitable for development of a vigorous research program related to molecular and cellular pharmacology or more traditional pharmacological disciplines. The search committee is particularly interested in individuals using techniques of molecular biology and genetic engineering to solve pharmacological problems (receptors, effectors, hormone and drug actions, human disease). Applications are invited from individuals who do not consider themselves "pharmacologists" in the traditional sense. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.* Submit curriculum vitae and names of three references to:

Search Committee
Department of Pharmacology
Bowen Science Building
University of Iowa
Iowa City, IA 52242

ASSISTANT PROFESSOR PHARMACOLOGY AND TOXICOLOGY

Tenure-track position available. Ph.D. degree in pharmacology and at least 2 years of postdoctoral research required. The applicant will be required to teach and to initiate an independent research program. Please submit curriculum vitae and the names of three referees to: **Dr. G. S. Marks, Department of Pharmacology and Toxicology, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

In accordance with Canadian immigration requirements, this advertisement is directed particularly toward Canadian citizens and permanent residents.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY (TWO POSITIONS)

The Department of Biochemistry in the College of Basic Sciences, Louisiana State University, Baton Rouge, invites applications for two tenure-track faculty positions at the level of assistant professor. Candidates must have at least 2 years of postdoctoral experience and an established record of research productivity. Applicants in the general areas of: (i) protein structure and function and (ii) the biochemistry of differentiation and development, will receive preference, but excellent candidates in all research areas will be considered. Substantial start-up funds and competitive salaries are available. Applicants should send curriculum vitae, a statement of research interests, and three letters of recommendation by 1 April 1986 to:

Dr. Roger A. Laine, Chairman
Department of Biochemistry
322 Choppin Hall
Louisiana State University
Baton Rouge, Louisiana 70803

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

ASSISTANT PROFESSORS IN BOTANY/BIOLOGY

Applications are invited for **TWO POSITIONS**. Responsibilities for each will include the development of a creative and vigorous research program leading to publications and extramural funding. Participation in undergraduate and graduate teaching programs is required. A **PLANT MOLECULAR BIOLOGIST** is sought. Preference given to candidates documenting abilities in molecular approaches to research in interspecies gene transfer or gene regulation. Teaching could include developmental, molecular, or plant physiology courses. The other position is for an **EVOLUTIONARY BOTANIST**. Candidates should document research abilities in plant evolutionary biology, reproductive processes, or population genetics. Teaching includes participation in general biology or general botany and advanced courses in specialization area. Successful candidates must have a Ph.D. degree. Both are 9-month, tenure-track positions beginning 1 September 1986, or as soon thereafter as possible. Applications must include curriculum vitae, three letters of recommendation, and a statement of teaching philosophy and research goals. Send to: **Dr. Donald Galitz, Chairman, Botany/Biology Department, North Dakota State University (NDSU), Fargo, ND 58105, by 14 March 1986.** *NDSU is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PATHOLOGY

The Department of Pathology at Rutgers Medical School is recruiting a tenure-track position for a molecular biologist with expertise in macromolecular interactions and their manipulation by solution perturbants, including antibodies and their analysis by physical methods, electron optical imaging, and x-ray diffraction. Individuals applying must have a Ph.D. or M.D. or equivalent and several years of postdoctoral training. Experience with cell culture and monoclonal antibody production, as well as molecular graphics, is desirable. Send curriculum vitae to: **Dr. Robert Trelstad, Chairman, Department of Pathology, UMDNJ-Rutgers Medical School, P.O. Box 101, Piscataway, NJ 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

ASSOCIATE/ASSISTANT PROFESSOR OF PHYSIOLOGY

Applications are solicited for a tenure-track position at the rank of assistant/associate professor in the Department of Physiology, Michigan State University. Candidates must hold a doctoral degree (D.V.M., D.O., M.D., and/or Ph.D.) with research experience in the cellular and/or molecular aspects of endocrinology. Opportunities are available for both collaborative and independent research and for undergraduate, graduate, and professional student teaching. A background or interest in animal health is required. Interested individuals should submit complete curriculum vitae and bibliography, and the names and addresses of three references by 17 March 1986 to: **Dr. N. Edward Robinson, Endocrinology Search Committee, Department of Physiology, Giltner Hall, Michigan State University, East Lansing, MI 48824-1101.** *MSU is an Equal Opportunity/Affirmative Action Employer.*

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US Army Medical Research
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Announcement #DA 7-86

Opens: 30 Jan 86; Closes: 28 Feb 86

Position: The Deputy for Science plans and coordinates a comprehensive research and development program in medical defense against toxins of biological origin, infectious agents of military importance, microorganisms which require special containment facilities, and biologically synthesized toxins. Assists the Commander in the full range of managerial responsibilities. Coordinates intramural contract research and services of military and non-military agencies. Represents the Commander at all organization levels.

Requirements: Recognized authority in biological sciences related to toxicology. Additional experience in pharmacology, physiology or biochemistry preferred.

Contact: Mr. Joseph Hise, (301) 663-2950 for application procedures.

Equal Opportunity Employer

VICE PRESIDENT FOR AGRICULTURAL ADMINISTRATION AND EXECUTIVE DEAN, COLLEGE OF AGRICULTURE

The Ohio State University

The Ohio State University is seeking applications and nominations for Vice President for Agricultural Administration and Executive Dean of the College of Agriculture. Major responsibilities include: serving as academic dean of the College of Agriculture including the School of Natural Resources and the Agricultural Technical Institute, and administrative responsibility for the Ohio Agricultural Research and Development Center and the Ohio Cooperative Extension Service including programs in agriculture, home economics and natural resources. Candidates should have broad academic experience and a record of administrative/leadership ability generally consonant with the complexity of a large land-grant university. Earned doctorate preferred.

Nominations and letters of interest with pertinent supporting materials should be sent to **Dr. Bernard L. Erven, Search Committee Chairperson, Office of Academic Affairs, The Ohio State University, 203 Bricker Hall, 190 North Oval Mall, Columbus, Ohio 43210 (614-422-5881).** The Search Committee will begin reading dossiers March 1, 1986, and will continue to receive them until a candidate is selected.

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

The Invitron Corporation, a leading manufacturer of important biomolecules utilizing highly proprietary cell culture technology, is accepting resumes for the following positions:

CELL BIOLOGIST/MAMMALIAN CELL CULTURISTS. This position in our California research facility, requires a Ph.D. and extensive experience in the development and scale up of cell lines for monoclonal antibody and/or recombinant protein production. #R2

BIOCHEMIST. This position, also in the California facility, requires a Ph.D. and postdoctoral experience in protein purification, HPLC and amino acid analysis. #R3

CELL CULTURIST. This position in our St. Louis facility, requires a B.S. or M.S. and extensive industrial or academic tissue culture experience. Large scale tissue culture experience is a plus. #R4

We offer excellent salaries and benefits, a relocation package and an opportunity for professional growth. Qualified candidates should submit a detailed resume, including publications and salary history to:



INVITRON

INVITRON CORPORATION
Attention: Human Resources Manager
8000 Maryland Avenue, Suite 860
Clayton, MO 63105

AN EQUAL OPPORTUNITY EMPLOYER

Seragen, Inc., a rapidly growing biotechnology company, is offering exciting opportunities in the Boston, Massachusetts area to qualified individuals. Our Biochemical Development groups have an immediate need to fill several openings:

Protein Biochemistry

We are seeking a biochemist with strong skills in bioseparation techniques to join our protein chemistry team. Responsibilities will include development of new processes leading to the isolation and scale-up of proteins produced by rDNA technology. This position will join a goal-oriented research team in developing ongoing projects as well as planning for new programs in their area of expertise.

Qualified individuals will have a Ph.D. with a minimum of two years postdoctoral experience.

Fermentation Microbiologist

Our current needs also require a fermentation microbiologist for a "hands-on" role as part of a team developing pharmaceutical products prepared by recombinant DNA technology. This position will contribute to the development of new processes, validation of subsequent manufacturing processes, and pilot production.

Qualified candidates will have a M.S. degree in microbiology (or closely related field) and 1+ year experience with recombinant microbial products in fermentation or a B.S. degree and 3+ years relevant experience. Industrial and/or computer controlled fermentation experience preferred.

Seragen, Inc. offers a competitive compensation and benefit package and is located 30 minutes from the Boston area. Qualified candidates should send a resume to: **Personnel Director, Seragen, Inc., 128 Spring Street, Lexington, MA 02173.**

— An Equal Opportunity Employer —

SERAGEN

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY

Tenure-track position at undergraduate liberal arts college beginning August 1986. Ph.D. required; teaching experience preferred. Salary based upon qualifications and experience. Responsibilities include teaching general introductory course and courses in microbiology and botany. Application deadline 14 March 1986. Send letter of application, curriculum vitae, transcripts, and three letters of recommendation to: **Dr. H. W. Williams, Chairman, Department of Biology, Westminster College, Fulton, Missouri 65251.** *Westminster College is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN MICROBIOLOGY

Tenure-track position in a department in which teaching and research are emphasized. Ph.D. in microbiology, plus postdoctoral experience are necessary. Strength is required in fermentation microbiology, growth of various microorganisms, and biochemical pathways and their control, especially as these areas relate to biotechnology. The successful applicant will participate in teaching introductory and general microbiology, and be responsible for a course in a specialty subject (for example, microbial biochemistry, industrial microbiology). This person must also develop an independent research program in one of the specialties listed above or in a related field. Salary negotiable. Send curriculum vitae and names and addresses of four references to: **David M. Ward, Department of Microbiology, Montana State University, Bozeman, MT 59717.** Deadline for applications is 11 April 1986. *Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST. Purdue University Calumet expects to appoint chemistry-oriented biochemist as tenure-track assistant professor effective August 1986. Appointee must have Ph.D. and assume primary responsibility for two-semester biochemistry sequence for chemistry and bioscience students. Some service in teaching general and lower level biochemistry required. Purdue Calumet is part of a statewide system serving about 7000 students in about 80 curricula. Department has modern facilities on well-maintained campus situated in attractive suburban area 25 miles southeast of downtown Chicago. Candidates should submit résumé and names of at least three referees by 24 March 1986 to: **Professor N. K. Nelson, Chemistry Search Committee Chairperson, Department of Chemistry and Physics, Purdue University Calumet, Hammond, IN 46323-2094.** *Purdue University Calumet is an Equal Opportunity Employer.*

TENURED OR TENURE-TRACK POSITION FOR BIOMEDICAL/BIOENGINEERING SCIENTIST. The University of Kentucky invites applications for a position on the core faculty of the **GRADUATE CENTER for BIOMEDICAL ENGINEERING.** The position requires a medical science Ph.D. and/or M.D. degree with a strong background in physics and mathematics. The center has ongoing programs in cardiovascular and musculoskeletal biodynamics, tissue regeneration, instrumentation, human performance, and signal/image processing. Programs in rehabilitation engineering and sports medicine are under development. Demonstrated excellence in both research and teaching required. Salary and rank are open; start-up funding available. Applicants should submit a detailed résumé with the names and addresses of at least four references to: **Dr. J. F. Lafferty, Chairman, Biomedical Engineering Search Committee, Wenner-Gren Research Laboratory, University of Kentucky, Lexington, KY 40506-0070; telephone: 606-257-2783.** Applications should be submitted before 30 March 1986. *The University of Kentucky is an Equal Opportunity Employer.*

BIOLOGIST-ZOOLOGIST: Warren Wilson College seeks a Ph.D., competent to teach comparative anatomy, vertebrate zoology, invertebrate zoology, and contribute to courses in environmental studies. Although emphasis is on teaching, we prefer an individual who will maintain research in an area which complements our existing strengths in molecular or environmental biology. Warren Wilson is a small, financially sound, fully accredited, 4-year liberal arts college on an 1100-acre campus in the Blue Ridge Mountains near Asheville. *Applications from women and minorities are encouraged.* Curriculum vitae, copies of selected publications, and three letters of reference should be sent before 15 March to: **Dr. Syd Craig, Box 5036, Warren Wilson College, 701 Warren Wilson College Road, Swannanoa, NC 28778.**

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY

The Department of Physiology, State University of New York (SUNY) at Buffalo, School of Medicine, seeks a new tenure-track faculty member at the rank of assistant professor, effective 1 September 1986. This individual with primary training in physiology is expected to teach endocrinology and to develop an independent research program in an endocrine system at the cellular/subcellular level. We anticipate expansion of this research program during the next 3 to 5 years under the leadership of the successful candidate. The department has strong research programs in cardiovascular physiology, membrane transport, neurobiology, regulation of body fluid volume, and respiratory and environmental physiology. Minimal qualifications for this position are 3 years of training and experience beyond the doctoral degree, including some teaching. Candidates whose qualifications exceed the above minimal requirements will be considered for higher rank.

Send résumé, names of three references, and a brief description of research interests by 1 April 1986 to: **Dr. Suk Ki Hong, Professor of Physiology, 124 Sherman Hall, SUNY at Buffalo, Buffalo, New York 14214.** *SUNY-Buffalo is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT RESEARCH BIOCHEMIST THE DEPARTMENT OF PHYSIOLOGY-ANATOMY UNIVERSITY OF CALIFORNIA BERKELEY

Invites applications to fill a research position at the assistant research level (range \$32,800 to \$41,100). Minimum requirements: Ph.D. degree; 4 years of experience in biochemical adaptations to exercise and muscle diseases in man and animals; specific knowledge of microassay for oxidative activities in tissue biopsy samples; and familiarity with biochemical methodology, including HPLC methods for analysis of redox components such as vitamin E and quinones and quinols. Research concerns diet, animal exercise, and training in relation to tissue oxidative changes and animal endurance capacity. Studies also include evaluation of dietary nutritional deficiencies to investigate antioxidant and oxidative processes. Dietary manipulations include vitamins E and C status, selenium status, and iron status. Leadership skills are required to lead a team of investigators in the study of unsolved problems in the physiology and biochemistry of physical exercise. An outstanding publications record is expected. Interested individuals should write a letter explaining their qualifications and enclose current curriculum vitae and list of three or more persons who could act as referees to: **Search Committee, Department of Physiology, 2544 Life Sciences Building, University of California, Berkeley, CA 94720.** Applications must be received by 31 March 1986. *The university is an Equal Opportunity/Affirmative Action Employer.*

CARDIAC RESEARCH COORDINATOR Emory University School of Medicine

Experienced physiologist needed to coordinate new cardiac research laboratory which is committed to developmental research with emphasis on myocardial function and metabolism. The position will permit independent research and collaboration with clinicians and basic scientists in a private university-based program. Send curriculum vitae to: **George W. Brumley, M.D., Professor and Chairman, Department of Pediatrics, 2040 Ridgewood Drive, N.E., Atlanta, Georgia 30322.** *Emory University is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO, CHAIR OF DEPARTMENT OF BIOCHEMISTRY

Nominations and applications are invited for the position of **CHAIR AND PROFESSOR** with tenure. A starting date of September 1986 is preferred. Candidates should have a distinguished research record, experience in teaching students of medicine and/or other health science professions, and demonstrated leadership in administrative abilities. Applications with curriculum vitae or nominations should be sent by 15 March 1986 to: **Dr. Edward J. Masoro, Search Committee for Biochemistry Chair, Department of Physiology, University of Texas Health Science Center, San Antonio, Texas 78284-7756.**

The University of Texas Health Science Center is an Affirmative Action/Equal Employment Opportunity Employer.

POSITIONS OPEN

ATOMIC PHYSICIST to conduct experimental research in vacuum ultraviolet spectroscopy and photoionization processes. Must have Ph.D. in atomic physics with several years of experience in photoion and photoelectron spectroscopy, mass spectroscopy, and synchrotron radiation. Publications in refereed journals. Salary: \$1950 per month. Send résumés to: **Keith Myers, Nebraska Department of Labor, P.O. Box 94600, State House Station, Lincoln, NE 68509.**

M.S. IN BIOTECHNOLOGY. A graduate program in biotechnology is offered at the University of Tennessee, Knoxville. It includes extensive training in cell biology and recombinant DNA methodologies, as well as process engineering, plant and animal tissue culture, and monoclonal antibodies. It also includes either co-op experience with industry, or a traditional thesis in an area of specialization. Seminar on sociological, bioethical, and regulatory aspects of biotechnology is part of the program. Financial assistance is available. Please apply to:

**Program Director, Biotechnology
M303 WLS Building
The University of Tennessee
Knoxville, TN 37996-0830**



Wayne State University

SEARCH CHAIRPERSON— DEPARTMENT OF PHARMACOLOGY

Wayne State University invites applications and nominations for the position of chairperson of the Department of Pharmacology. The School of Medicine seeks a scientist with an outstanding research program and demonstrated academic leadership abilities. The position offers the opportunity to build from an established core of 12 full-time faculty with diverse research interests. Wayne State University is a state-supported institution committed to academic excellence.

Candidates should submit curriculum vitae by 7 March 1986 to:

**John W. Phillis, Ph.D., D.Sc., D.V.Sc.
Professor and Chairman
Department of Physiology
Wayne State University
540 East Canfield
Detroit, MI 48201**

Equal Opportunity Employer/Affirmative Action Employer

DIABETES/ENDOCRINOLOGY FACULTY POSITIONS:

The newly formed Diabetes Program of the Division of Endocrinology, Metabolism, and Hypertension, Wayne State University School of Medicine, invites applications for faculty positions at the assistant or associate professor level. The program seeks qualified candidates interested in pursuing active research at both molecular and clinical levels. Successful candidates will also participate in medical and graduate student teaching programs of the Department of Internal Medicine. An M.D. or M.D./Ph.D. degree, Board-certification in internal medicine and Board-certification in endocrinology/metabolism (or eligibility) are required. Joint faculty appointment in the Department of Physiology is available to qualified candidates. Candidates should send curriculum vitae and names of references to: **George Grunberger, M.D., Division of Endocrinology, Metabolism and Hypertension, Wayne State University, University Health Center-4H, 4201 Saint Antoine, Detroit, MI 48201.** *Wayne State University is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR ENDOCRINOLOGIST—Insulin

Action: The newly formed Diabetes Program of the Division of Endocrinology, Metabolism and Hypertension, Wayne State University School of Medicine, invites applications from qualified candidates with a Ph.D. degree and interest in the field of hormone action. Candidate must be able to establish an independent research program and also complement research efforts of other members of the Diabetes Program. Expertise in molecular biology and protein biochemistry of the peptide hormone receptors, as well as hormone action, is required. Interested applicants should send curriculum vitae, summary of research interests, and names of references to: **George Grunberger, M.D., Division of Endocrinology, Wayne State University, University Health Center-4H, 4201 Saint Antoine, Detroit, MI 48201.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CELL BIOLOGIST—Department of Anatomy, Bowman Gray School of Medicine of Wake Forest University, seeks applications for a tenure-track, assistant professor position to begin September 1986. Suitable research areas include: cell membranes; cytoskeleton; cell-cell interactions; receptors and signal transduction; or molecular aspects of cellular differentiation. Competence in one or more modern techniques of molecular biology, immunology, and biochemistry is highly desirable. Present interdepartmental research strengths and areas targeted for further expansion at Bowman Gray include: arteriosclerosis; biology of aging; membrane biology; neuroscience; and oncology. Candidates are expected to have a strong research record with postdoctoral training and, if presently in an assistant professor position, must have a funded research program. Teaching responsibilities will include participation in microanatomy and cell biology courses for medical and graduate students and one graduate level course of the candidate's choice. Previous teaching experience in microanatomy and cell biology and a background in the anatomical sciences is desirable. Send curriculum vitae, a statement of anticipated research goals and directions, and the names of three references to: **Chairman, Cell Biology Search Committee, Department of Anatomy, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** Deadline: 31 March 1986. *An Equal Opportunity Employer.*

CELL/MOLECULAR BIOLOGIST

The Department of Anatomy at Loyola University Medical Center, Maywood, Illinois, is seeking a cell/molecular biologist to fill a tenure-track position at the assistant or associate professor level, beginning 1 July 1986. Applicants should have completed postdoctoral training and be capable of establishing an independent research program supported with extramural funds. While the specific area of research is not important, individuals who utilize molecular approaches in the fields of general cell biology, immunobiology, or neurobiology are encouraged to apply. Willingness to teach in histology/embryology and graduate cell biology is required. Curriculum vitae, representative publications, and the names of three referees should be sent to:

Dr. John Clancy, Jr., Chairman
Department of Anatomy
Loyola University of Chicago
Stritch School of Medicine
2160 South First Avenue
Maywood, Illinois 60153

Deadline for application receipt is 1 April 1986. *Loyola University Medical Center is an Equal Opportunity/Affirmative Action Employer.*

CLINICAL LABORATORY IMMUNOLOGIST

The Department of Laboratory Medicine in the University of Washington School of Medicine is recruiting an individual who is Board-certified or eligible in clinical pathology and rheumatology for appointment as an assistant professor. Candidates should be prepared to direct the immunology division in the Department of Laboratory Medicine. Responsibilities will include teaching residents, postdoctoral fellows, and medical, graduate, and undergraduate students, as well as supervising the clinical laboratory and developing an academic research program. Please submit curriculum vitae by 31 March to: **Dr. Paul E. Strandjord, Department of Laboratory Medicine, SB-10, University of Washington, Seattle, Washington 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

ENDOCRINOLOGIST: Applications are invited for a tenure-track position as assistant professor working in areas such as molecular or cellular endocrinology, regulation of growth and development, and neuroendocrinology. The successful applicant will be expected to develop a vigorous research program and to teach at the undergraduate and graduate levels. Requirements are a Ph.D. or equivalent, postdoctoral research in his/her area of interest, and strong prospects for funding of the applicant's research program. Send a detailed curriculum vitae with a summary of research interests and have three letters of recommendation forwarded to: **S. H. Bishop, Department of Zoology, Iowa State University (ISU), Ames, Iowa 50011.** Applicant review begins 21 March 1986. *ISU is an Equal Opportunity Employer.*

POSITIONS OPEN

CELL BIOLOGY AND ANATOMY POSITION AVAILABLE

A faculty position is available at the associate professor level for an individual with 10 to 15 years of experience past the awarding of a Ph.D. degree in the area of cell biology/cell physiology. The specific research area of qualified candidates should be in nonmuscle cell motility with emphasis on the structure, function, and subcellular localization of contractile proteins. Furthermore, the candidate should exhibit experience in attempting to achieve the highest possible resolution of these proteins, especially the myosins, within the cytoplasm of moving cells, using immunofluorescence techniques. The candidate should have at least 25 to 30 publications in critically reviewed scientific journals. In addition, candidates should have 15 to 17 years of teaching experience in the general areas of cell biology/cell physiology at the undergraduate, graduate, or medical school levels. Applications should be postmarked no later than 4 April 1986. Interested persons should send their complete curriculum vitae and have a minimum of three knowledgeable referees send letters directly to: **Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, The Medical School, Northwestern University, 303 East Chicago Avenue, Chicago, Illinois 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

The Division of Nutritional Sciences at Cornell University is seeking candidates for the position of **DIRECTOR OF THE CORNELL NUTRITIONAL SURVEILLANCE PROGRAM.** The director will provide a focus for faculty and students regarding issues in international nutrition, participate in conceptual development, research and evaluation, coordinate financial resources, and direct program staff. Candidates should have a doctoral degree in an appropriate area, such as nutrition, economics, epidemiology, or government, and exposure to nutrition planning and programming. Teaching experience is highly desirable. Experience with information systems in developing countries is necessary, including data collection and analysis. Experience with a United Nations agency involved in nutrition planning and development is desirable. The initial appointment will be for a 2-year period, with academic title open, depending upon qualifications. Candidates should send curriculum vitae and names of three references to: **Dr. J.-P. Habicht, Division of Nutritional Sciences, Cornell University, Ithaca, NY 14853.** The closing date for applications is 15 March 1986. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

University of Michigan Medical School, Department of Biological Chemistry, is inviting applications for a **FACULTY** position at the rank of **lecturer or assistant professor**, depending upon experience. Candidates should have (i) a Ph.D. in biochemistry or molecular biology, (ii) some postdoctoral training in molecular genetics, and (iii) interest in research on organization, expression, and regulation of bacterial genes. The duties include teaching biochemistry/molecular biology (not to exceed 10 percent of total effort). Send résumé to: **Dr. P. Datta or Dr. M. J. Coon, Chairman, Department of Biological Chemistry, the University of Michigan Medical School, Ann Arbor, Michigan 48109-0010.** *A nondiscriminatory, Affirmative Action Employer. Code 41.*

TENURE-TRACK FACULTY POSITION IN CELL BIOLOGY. The Department of Thoracic Surgery of the University of Texas System Cancer Center (UTSCC), M.D. Anderson Hospital and Tumor Institute, seeks applications for a position at the assistant professor level. Applicants must have a relevant Ph.D. or M.D. degree, postdoctoral training, and evidence of ability to establish an independent research program. We are particularly interested in individuals with experience in establishing and characterizing human tumor cells in tissue culture. Experience with chemically defined media and clonogenic assay techniques is also advantageous. Send curriculum vitae, reprints of published works, and letters from three references to:

Jack A. Roth, M.D.
Thoracic Oncology Section
Building 10, Room 2B07
National Institutes of Health
Bethesda, Maryland 20892

The UTSCC is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CHAIR

DEPARTMENT OF BIOLOGICAL SCIENCES UNIVERSITY OF MARYLAND BALTIMORE COUNTY (UMBC)

The UMBC Department of Biological Sciences is seeking a distinguished biologist to succeed **Dr. Keith R. Porter**, as professor and chair, effective 1 July 1987. The department includes 25 faculty members with 400 undergraduate majors and 75 graduate students. The research interests of the faculty range from molecular and cellular biology to organismic and population biology. The department offers the B.A., M.S., and Ph.D. degrees in biological sciences and the M.S. degree in applied molecular biology. The University of Maryland Baltimore County Campus is located in the Baltimore suburb of Catonsville, with a current undergraduate enrollment of 8500.

Send curriculum vitae and names and addresses of at least three references by 15 April 1986, to:

Dr. Brian P. Bradley
Chairman of Search Committee
Department of Biological Sciences
University of Maryland Baltimore County
Catonsville, Maryland 21228

UMBC is an Affirmative Action/Equal Opportunity Employer.

Women and minorities are encouraged to apply.

THE UNIVERSITY OF WESTERN ONTARIO FACULTY OF MEDICINE

Chairman

Department of Pharmacology and Toxicology

Applications are invited for the chairmanship of the Department of Pharmacology and Toxicology effective 1 July 1986.

The position requires an individual with strong leadership and administrative skills, a commitment to academic excellence, and a distinguished record of research and teaching.

Applications including a current curriculum vitae should be forwarded to:

Dr. L. S. Valberg
Dean
Faculty of Medicine
The University of Western Ontario
London, Ontario
Canada N6A 5C1

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

An Equal Opportunity Employer.

The deadline for applications is 31 March 1986.

THE UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

DEPARTMENT OF FAMILY PRACTICE

The Department of Family Practice is expanding its clinical activities within the university medical center and is recruiting several, additional faculty members for appointment in either the full-time clinical track or the tenure track. Clinical track appointments are made with the expectation that the faculty member's primary effort will be in the area of patient care, including obstetrics and clinical teaching. Scholarly activity by clinical faculty members is expected, but permanence and advancement are not primarily based upon research. Tenure-track faculty members are expected to conduct successful research and to demonstrate a high level of scholarly achievement. Tenure-track faculty are also expected to participate in patient care and teaching, but to a lesser degree than clinical faculty.

These are exciting opportunities for individuals who are committed to an academic career and who wish to be associated with an expanding, progressive Department of Family Practice in one of the nation's major medical schools. Academic rank will depend upon past experience and achievements. Salary is highly competitive and fringe benefits approximate 26 percent of salary. A letter of interest and a recent copy of the applicant's curriculum vitae should be sent to: **Terence C. Davies, M.D., Professor and Chairman, Department of Family Practice, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** *The University of Michigan is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BOTANIST PACIFIC TROPICAL BOTANICAL GARDEN

The Pacific Tropical Botanical Garden, the only congressionally chartered national tropical botanical garden, devoted to responsibilities in research, education, and conservation, seeks to fill a permanent position in systematic and evolutionary botany effective 1 July 1986. The duties will include research on the flora of Hawaii, the Pacific Basin, and/or other tropical areas. The appointee may also assist the director in various administrative and/or editorial matters and contribute to the garden's educational program. Adjunct appointments at other Hawaiian research and education institutions may be possible. A Ph.D. in systematic botany is required. Postdoctoral and/or other experience is desirable. Salary commensurate with experience.

Applicants should submit curriculum vitae, description of current and proposed research, and arrange to have three letters of recommendation sent by 1 April 1986 to:

Dr. William L. Theobald, Director
Pacific Tropical Botanical Garden
P.O. Box 340
Lawai, Kauai, Hawaii 96765

The Pacific Tropical Botanical Garden is an Equal Opportunity Employer.

ECOLOGY/COMPUTERS. One-year position, beginning fall 1986, with strong probability of tenure-track for an ecologist with an interest in computers. Applicants must be committed to teaching undergraduates at a small liberal arts college in ecology, environmental studies, and possibly botany or an area in the physical sciences, and would be expected to contribute to the teaching of computer literacy. Experience with MSDOS or UNIX5 would be helpful, but not essential. Ample laboratory space and greenhouse are available. Send curriculum vitae, statement of teaching interests, and three letters of reference by 1 April to: Dr. Thomas J. Reitz, Ecologist Search Committee, Bennington College, Bennington, VT 05201.

ELECTRON MICROSCOPY (TEM/SEM): Biological applications. Designed for professional and laboratory personnel who desire practical hands on training in basic techniques of TEM and SEM. Graduate credit and/or certificate awarded. Tuition: \$800. Date: 8 through 25 July 1986. For further information and registration form, contact: Dr. Dan Scheirer, Department of Biology, Northeastern University, Boston, MA 02115; telephone: 617-437-2260.

ENVIRONMENTAL HEALTH EFFECTS BIOLOGIST. Tenure-track, assistant professor position in a diversified Department of Environmental Science and Engineering (ESE). Ph.D. required in a biological science and research experience in health effects of environmental toxicants at the organismal, cellular, or molecular level. Expected to develop courses and a vigorous, extramurally funded research program. Send curriculum vitae and three letters of recommendation to: Dr. Mark Sobsey, ESE, School of Public Health, University of North Carolina, Chapel Hill, NC 27514, by 30 April 1986. *Affirmative Action/Equal Opportunity Employer.*



ENZYME SYSTEMS PRODUCTS

A small, unique company, nestled in the Amador Valley of Northern California, is 40 miles southeast of San Francisco. Devoted to organic synthesis, cytochemistry, and their novel clinical application. We are now looking for highly motivated hands-on laboratory personnel for immediate positions:

- Carbohydrate or Nucleotide Synthesis Chemist
Experience required.
- Enzyme Isolation and Purification Biochemist
Experience required in update technology.
- Cytoimmunologist, B.S. or M.S.
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- Antibody Production Research Associate
Skilled in polyclonal and monoclonal technology.

Send curriculum vitae to: Prototek Section of ESP, J. M. Kinder, 6497 Sierra Lane, Dublin, CA 94568.



National
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Employment Opportunities

Civilian Employment
Department of National Defence
Canada

We require qualified new graduates and experienced research and development personnel to meet the future needs of Civilian Defence Scientists. You will be joining a team of over 550 Defence Scientists at seven research establishments across Canada which is involved in applied research and development; social, economic, and strategic analysis; and operational research. Main locations are near Halifax, Quebec City, Ottawa, Toronto, Victoria, and Medicine Hat (Alberta).

Fields and Specialties:

Biology — microbiology, pharmacology, toxicology, physiology, biophysics, radiobiology

Chemistry

Computer Science

Economics

Engineering — except forestry and geology

History — military

Mathematics — applied mathematics and operational research

Physics

Psychology — experimental

Political Science — strategic studies, international relations

Sociology

You require a Master's or Doctorate degree in a relevant field from a recognized university. However, applicants who have obtained a Bachelor's degree with honours in Mathematics, Computer Science or Engineering are also invited to apply.

Canadian citizens will be given preference. Due to the nature of the work, all employees will require security clearance.

We offer a salary ranging from \$18,599 to \$62,294 which is determined on the basis of demonstrated professional development. Salary and benefit levels are competitive and are the product of collective bargaining.

Further information may be obtained at the address given below.

To apply, forward your résumé and/or application form indicating your primary fields of interest. Please enclose the names and addresses of three individuals who may be contacted in reference to your professional abilities.

Directorate of Defence Scientist Personnel
Programs

National Defence Headquarters

Ottawa, Canada K1A 0K2

Attention: DDSPP-4

Personal information you provide is protected under the Privacy Act. It will be held in personal information bank DND/PSE-902.

The Department of National Defence
is an equal opportunity employer

Canada

POSITIONS OPEN

DIRECTOR OF WOMEN'S STUDIES

Indiana University of Pennsylvania (IUP) invites applications for the position of director of Women's Studies to begin September 1986. The position will give half-time to the initiation, direction, and promotion of the IUP Women's Studies Program and half-time to teaching and research. Responsibilities will include the development of an interdisciplinary minor. This is a full-time, tenure-track position in one of the following established academic departments: biology, English, French, Spanish, German, history, philosophy, political science/international studies, psychology, or sociology/anthropology. Salary commensurate with rank and experience; excellent fringe benefits; summer contracts may be available. Scholarly work in women's studies and in the respective discipline is essential. Both demonstrated strength in teaching and documented promise to provide leadership in furthering the growth of a gender-balanced curriculum within the university and in representing it to the community are necessary. Ph.D. required. *IUP has a strong commitment to the recruitment of women and minority faculty.* Candidates should send a cover letter, curriculum vitae, three letters of recommendation, and illustrative reprints/preprints to: **Sherrill Kuckuck, c/o Provost's Office, 205 Sutton Hall, IUP, Indiana, PA 15705.** Review of applications will begin 28 February 1986 and continue until position is filled.

IUP is an Affirmative Action/Equal Opportunity Employer

FACULTY POSITION— MOLECULAR BIOLOGY OR GENETICS OF MICROBIAL PATHOGENESIS

The Department of Medical Microbiology and Immunology is seeking candidates for assistant to associate professor level, with a starting date of the fall of 1986. Individuals with a strong research background in molecular and genetic aspects of microbial pathogenesis should apply. Successful candidates are expected to have a funded research program. The responsibilities of the position include teaching graduate and medical students and developing an active research program. A Ph.D. or M.D. degree, plus postdoctoral experience are required. Salary and level negotiable, depending upon training and experience. Submit curriculum vitae, bibliography, and list of at least three references to:

Blaine L. Beaman, Ph.D., Professor and Chairman
Department of Medical Microbiology
and Immunology
School of Medicine, University of California
Davis, CA 95616

Open until filled, but not after 1 August 1986.

UCD is an Equal Opportunity/Affirmative Action Employer.

GRADUATE RESEARCH IN BIOLOGY. The Department of Cellular and Structural Biology offers a challenging opportunity for graduate studies in human genetics, molecular and cellular biology, and neurobiology. The Ph.D. program is flexible to encourage interactions among faculty and students and to facilitate the application of interdisciplinary experimental approaches to research projects. Faculty members are active in research in the following areas:

- | | |
|-------------------------------------|-----------------------------------|
| 1. Genetic control of human genes | 2. Plasma membrane glycoproteins |
| 3. Molecular basis of immunity | 4. Extracellular matrix molecules |
| 5. Mechanisms of cell proliferation | 6. Reproductive endocrinology |
| 7. Control of pituitary function | 8. Control of gene transcription |

Qualified candidates (GPA of approximately 3.5 and combined verbal and quantitative GRE scores exceeding 1200) are encouraged to apply as soon as possible (preferably by 15 March 1986) for graduate assistantships with an annual stipend beginning at \$7158. The campus is part of a large health science facility located in northwest San Antonio. This area enjoys a mild climate from September to June with quick access to the beautiful Texas Hill Country. Forms for admission and brochures describing the program and faculty research interests can be obtained from: **Z. Dave Sharp, Ph.D., Applicant Advisor, Department of Cellular and Structural Biology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.**

Research Professionals

Look into Praxis Biologics— pioneer in combatting childhood infectious diseases

Our first name "Praxis" ...

derives from the Greek "prophylaxis," and indicates our mission to preserve health and prevent the spread of disease.

We were founded in June, 1983. In April, 1985, our first product—a *Haemophilus influenzae* b polysaccharide vaccine—became the first FDA-approved vaccine recommended for universal use in children since 1969. Today we have 3 products undergoing trials, and others in development.

You will find us a hospitable, closely knit team of prominent scientists, physicians, and business people. We are financially sound and poised for very substantial growth.

The opportunities

■ DIRECTOR, LABORATORY RESEARCH

You'll report directly to the President and direct/coordinate all research in virology, bacterial polysaccharides and proteins, and immunology. Must have PhD, and at least 10 years in research—5 of which have been in supervising research programs. Start-up experience preferred.

■ CELL CULTURIST

You'll be a mammalian cell tissue culture specialist in our Virology Division. Should have PhD, a broad background in cell culture, and experience in system design and optimization at different scales.

■ PROTEIN BIOCHEMIST

In our Virology Division, you'll work on the purification and characterization of membrane glycoproteins. Should have PhD, at least 3 years of postdoctoral experience, and strong background in analyzing protein structure-function relationships.

Our location

Rochester, New York is a city that ranks very high in quality of life—particularly in education, medical care, recreational/cultural resources, and cost-of-living factors. The area's medical research resources are first-rate.

For full briefing, and prompt, confidential consideration, please send curriculum vitae to: **Human Resources Department, Praxis Biologics, 300 East River Road, Rochester, NY 14623.**

PRAXIS BIOLOGICS

An equal opportunity employer, m/f.

POSITIONS OPEN

FERMENTATION SPECIALIST

The Department of Microbiology, University of Illinois at Urbana-Champaign, seeks a qualified individual to operate its pilot-plant fermentation facility.

Applicants should hold a B.S. or M.S. degree in microbiology or a related area with a strong background in biochemistry. Practical experience with modern fermentation equipment is desirable, as well as experience with microcomputers. Practical mechanical and electronic knowledge is also required.

The successful applicant will be responsible for the daily operation and maintenance of the fermentation system, as well as assisting department faculty and other users in conducting research dependent on large-scale bacterial cultivation. In addition, the successful applicant together with faculty of the Department will be expected to offer short courses on the operation of the fermentation system to graduate students and to conduct basic research in fermentation methodology. Salary negotiable. Starting date: summer or fall 1986.

Applicants should send curriculum vitae, a summary of relevant experience, and the names and addresses of three references to: **Dr. J. Konisky, Head, Department of Microbiology, University of Illinois, 131 Burrill Hall, 407 South Goodwin, Urbana, Illinois 61801; telephone: 217-333-1736.** To receive full consideration, applications should be received by 15 April 1986. Some interviews may be conducted before 15 April 1986. However, all applications that are received by that date will be given equal consideration. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.*

HEMATOLOGIST-ONCOLOGIST: BC/BE in Hematology and/or Medical Oncology to serve as staff physician in Hem-Onc at Durham VAMC and in a tenure-track appointment at Duke University Medical Center. An individual is sought who is capable of establishing an independent program of clinical and/or laboratory investigation. Opportunity to participate in multidisciplinary clinics in Lung, GI, and Head/Neck Oncology. Reply to Personnel Service (O5B), V.A. Medical Center, 508 Fulton Street, Durham, NC 27705. *An Equal Opportunity Employer*

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF MICROBIOLOGY

Applications are invited for a tenure-track faculty position at the assistant or associate professor level starting July 1986. Candidates must be capable of initiating an independent research program. The research area of interest is open. However, individuals using molecular or immunological approaches to investigate problems related to bacterial and viral pathogenesis are particularly encouraged to apply. Interested individuals should send their curriculum vitae, a letter outlining their teaching experience and research interests, and the names of three references by 1 April 1986 to:

**Dr. Gary R. Pearson, Chairman
Department of Microbiology
Georgetown University Medical Center
3900 Reservoir Road
Washington, DC 20007**

An Equal Opportunity/Affirmative Action Employer

GROUP HEAD

Senior-level position available immediately in management of recombinant DNA cloning group with New Jersey company. Responsible for coordination of staff activities within and between departments. Applicants should have postdoctoral experience, a proven record of managerial experience, and a solid publication record. Good benefits package. Salary commensurate with experience. **BOX 25, SCIENCE.**

MICROBIOLOGIST / GENETICIST—One-year (three-term) position teaching six courses (microbiology, genetics, two team-taught courses, one in area of specialty, and one on topic to be negotiated). Earlham, a leading liberal arts college, values excellence in teaching. Send curriculum vitae, statement of teaching interests, and three letters of recommendation to: **William Buskirk, Biology Department, Earlham College, Richmond, IN 47374,** by 25 March 1986. *An Affirmative Action/Equal Opportunity Employer, we specifically encourage applications from women and minorities.*

POSITIONS OPEN

FACULTY POSITION AVAILABLE—PHARMACOLOGY. Applications are invited from individuals with an earned Ph.D. degree and expertise in the area of pharmacology. The successful candidate will participate in teaching at the graduate and undergraduate levels, direct dissertations and theses, and conduct independent and collaborative research. There is some latitude relative to the area of research interest, but preference will be given to individuals with expertise in psychopharmacology and/or neuropharmacology. Salary and rank associated with this 12-month, tenure-track position will be commensurate with experience and qualifications. Interested individuals should submit a letter of application, a complete résumé, and the names of four references to:

**William M. Bourn, Head
Division of Pharmacology and Toxicology
School of Pharmacy
Northeast Louisiana University
Monroe, Louisiana 71209-0470**

Northeast Louisiana University is an Equal Opportunity Employer. Applications are encouraged from women and members of minority groups.

Applications are invited for a tenure-stream **FACULTY POSITION (assistant/associate professor)** in the Department of Microbiology, University of Toronto. Applicants should have demonstrated research experience in applying molecular, genetic, and/or biochemical approaches to the study of mechanisms of microbial virulence or microbial resistance mechanisms. Preference will be given to individuals whose investigations have been on medically relevant enteric bacteria. The successful applicant will be expected to establish an ongoing, independent research program and contribute to undergraduate and graduate teaching in the department.

Applicants should send curriculum vitae, a brief description of research plans or objectives, and three letters of recommendation to: **Dr. Leslie Spence, Chairman, Department of Microbiology, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada M5S 1A8.** *This advertisement is drawn to the attention of citizens and permanent residents of Canada, in accordance with Canadian immigration requirements.*

FACULTY POSITION—VISUAL DEVELOPMENT

Department of Vision Sciences State College of Optometry State University of New York

The Department of Vision Sciences of the College of Optometry seeks candidates in the field of early human visual development. Responsibilities include teaching perceptual and cognitive development in our four-year professional program, which offers the degree of Doctor of Optometry, and in our graduate program in vision sciences; supervising graduate research, including the directing of doctoral dissertations; and developing a research program in some sensory and/or oculomotor aspects of the early development of human vision. An active interest in abnormalities of visual development and in practical methods of assessing infants' visual functions in a clinical setting is highly desirable. Joint appointment in the Graduate Faculty and the Schnurmacher Institute for Vision Research will be offered. Qualifications for the position include the Ph.D. degree, significant published research, and teaching experience. This is a tenure-track position, and rank, salary, and tenure status are open. The position will be available September 1986, but may be assumed as late as February 1987.

Send a vita, statement of research plans, and the names, addresses, and phone numbers of three references to:

**Professor Dean Yager
Chairman, Visual Development
Search Committee
State College of Optometry
100 East 24th Street
New York, NY 10010**

An Equal Opportunity/Affirmative Action Employer

Postdoctoral Scientist GI Pharmacology

The Department of Pharmacology of Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to work in an environment designed to foster creative innovative research and to promote personal and professional growth. Our postdoctoral appointments are normally of 2 years duration.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community.

The successful candidate will:

- participate in a research program in the pharmacology of gastrointestinal smooth muscle with special reference to regulatory mechanisms within colonic smooth muscle cells.
- implement available methodology and develop new methods as necessary for characterizing the intracellular pathways for GI smooth muscle contraction and relaxation to several stimuli.
- work collaboratively with pharmacologists and biochemists interested in understanding the fundamental processes of post-receptor transduction in GI effector systems.
- publish work in scientific literature; present scientific findings at local and national meetings.

Candidates are required to have:

- a Ph.D. in Pharmacology or Physiology with 0-3 years postdoctoral experience in gastrointestinal pharmacology, physiology or smooth muscle research.
- experience in mechanisms of smooth muscle contraction and relaxation.
- or
- experience with measurements of cyclic nucleotides, cyclic nucleotide-dependent protein kinases, myosin phosphorylation or intracellular calcium.
- a record of published scientific accomplishments.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: **Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1582 Spring Garden Street, Philadelphia, PA 19101.** We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

Faculty Positions
Biomolecular Structure and Function
The Pennsylvania State University

Applications are invited for three tenure-track positions at any level as part of an expanded research concentration in the area of biomolecular structure and function. Candidates are being sought in each of the following areas: (i) protein crystal structure determination, (ii) nuclear magnetic resonance studies of proteins, and (iii) macromolecular computer graphics/energy calculations. The university has made a major commitment in this area including laboratory space and equipment necessary for the individual research programs such as high-field NMR, x-ray diffractometer including area detector, and computer graphics system. The positions will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as joint appointments in these departments. Joint affiliation with the newly formed Penn State Biotechnology Institute is also a possibility. Faculty already in the area include Drs. S. J. Benkovic, G. A. Hamilton, W. DeW. Horrocks, Jr., K. A. Johnson, C. R. Matthews, G. A. Rose, D. I. Shalloway, and J. J. Villafranca. Applicants should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Reply to: **Search Committees for Biomolecular Structure and Function, Department of Chemistry, 152 Davey Laboratory, Box P, University Park, PA 16802.** Please indicate the area for which you are applying. Include a detailed vitae, statement of research interests, and up to three recent representative reprints. In addition, the applicant should ask three individuals to send letters of reference directly to us. Review of applications will commence in February 1986. Deadline for receipt of applications is 15 April 1986, or until suitable candidates are identified.

An Equal Opportunity/Affirmative Action Employer

UNIVERSITY OF GUELPH
EGG PRODUCERS' CHAIR
ENDOWED CHAIR IN EGG PRODUCTS

The University of Guelph is seeking an **associate professor or professor** in the area of egg products utilization and egg technology. The position is funded by an endowment from the Ontario Egg Producers' Marketing Board. In addition to supplying an appropriate salary, funds will be provided for technical assistance and research. The chair has been established by the egg producers of Ontario to develop new and further uses of eggs and egg products in such areas as human and animal nutrition and industrial processes.

The applicant should be an innovative researcher with the expertise to investigate egg composition and use from a chemical, physical, and/or nutritional standpoint. The chair is essentially a research position and the incumbent will be expected to develop a program that includes the supervision of graduate students, technical help, and postdoctoral fellows. In addition to research funds provided by the endowment, the incumbent will be expected to seek other outside funding to strengthen and expand the research program.

The position will be housed in the Department of Animal and Poultry Science and will report to the chairman of the department. Excellent facilities are available in the Department of Animal and Poultry Science and, in addition, the incumbent will have access to facilities in other university units as the program requires. There are excellent opportunities to liaise with all on-campus departments allied to this area, as well as with the industry. Applications should include a complete résumé and the names of four people to whom we may write for reference.

Send to:

Dr. G. K. Macleod
Department of Animal and Poultry Science
University of Guelph
Guelph, Ontario
Canada N1G 2W1

Closing date for applications is 30 April 1986.

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

Position is subject to final budgetary approval.

DIRECTOR
—APPLIED IMMUNOLOGY
PROGRAM

The University of Southern Maine, in association with Maine Medical Center (the major teaching hospital in the state) and the Foundation for Blood Research (a nonprofit research organization) is beginning a new graduate program leading to a master of science degree in applied immunology. The Department of Applied Immunology is in the School of Applied Science (which also includes Computer Science, Engineering, and Technology) and affords a unique opportunity for collaboration among disciplines relating to the complex and rapidly changing field of immunology. Biology and chemistry programs are in the College of Arts and Sciences. The several biotechnology companies in the area will provide externships for students, and all of the above will be opportunities for collaborative research.

The successful candidate for this position will have a Ph.D., M.D., or both, be qualified for a tenure-track appointment, have a record of successful research and teaching experience; with scientific, leadership, interpersonal, organizational, communication skills, and successful grantsmanship experience necessary to develop and maintain the program; and will, consistent with other responsibilities, teach in the program and/or conduct research. All immunology-related scientific specialties will be considered.

Position available 1 July 1986 or earlier. Send applications, including cover letter and curriculum vitae, to:

Brian Hodgkin, Dean
School of Applied Science
University of Southern Maine
96 Falmouth Street
Portland, Maine 04103

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

MANAGER

Department of Animal Resources



An equal opportunity employer

Pfizer Central Research invites applications for the position of Manager in the Department of Animal Resources. The successful candidate must have a Doctor of Veterinary Medicine degree with specialty training in laboratory animal medicine and be board certified or board eligible in laboratory animal medicine. Candidates are required to have demonstrated capabilities in facility and personnel management roles.

You will report to the Director, Animal Resources and have primary responsibility for the management of a large diversified animal facility which supports a multidisciplinary research program. Those reporting to you include a clinical veterinarian, an operations supervisor, and a group of area supervisors. Duties also include supervision of veterinary care programs, disease surveillance practices, and provision of technical advice and assistance to research scientists.

In addition to an excellent potential for career growth, this position provides an opportunity to contribute to all levels of experimental work in a stimulating professional environment. We offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume in confidence to: Dr. J. K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

POSITIONS OPEN

FOREST SCIENTIST QUALITY ASSURANCE SPECIALIST

Northrop Services, Inc. is seeking five qualified individuals to assist in the Quality Assurance (QA) Program for research on the effects of atmospheric deposition on forest ecosystems, part of the National Acid Precipitation Assessment Program. Individuals will assist in the preparation of QA protocols, organize and interpret performance evaluations, audit research sites, and prepare QA reports. QA specialists will be located at one of several sites in the eastern U.S. or in Corvallis, Oregon. M.S. degree or equivalent experience in forest science/ecology or related environmental sciences is required. Experience/knowledge of field, greenhouse, and laboratory research is required. Communication skills, general knowledge of QA, and experience with atmospheric deposition research is desirable. Salary commensurate with qualifications. Send résumé and names of three references to:

Karen L. Borgen
Northrop Services, Inc.
200 S.W. 35th Street
Corvallis, Oregon 97333

Equal Opportunity/Affirmative Action Employer.

GAMETE PHYSIOLOGIST—EMBRYOLOGIST—IN VITRO FERTILIZATION—Position available for research scientist to spend approximately 20 percent of time working in an established in vitro fertilization program. Applicant should have ability to establish his/her own research and training programs to which remaining 80 percent of time would be devoted. This is a tenured/tenure-earning position with academic rank and salary commensurate with experience. Send letter of application and curriculum vitae to: J. Benjamin Younger, M.D., Department of Obstetrics and Gynecology, University of Alabama at Birmingham, Birmingham, AL; telephone: 205-934-5631.

Affirmative Action/Equal Opportunity Employer

GENERAL BIOLOGIST

The joint Biology Department of the College of Saint Benedict and Saint John's University is seeking to fill a 1 year, nontenure—but renewable (maximum 3 years) position beginning 1 September 1986. A master's of science degree is required, as well as teaching experience at the undergraduate level. Duties will include coordinating and teaching introductory biology, laboratories and nonmajor courses in environmental or life sciences. Send letter of application, curriculum vitae, three letters of recommendation and transcripts to: Kathy Flynn, Wage and Benefit Coordinator, College of Saint Benedict, Saint Joseph, MN 56374, by 15 March 1986. *Women and minorities are encouraged to apply.*

IMMUNOLOGISTS AND MOLECULAR BIOLOGISTS

The Center for Biotechnology, Baylor College of Medicine, offers an academic environment for application-oriented research in frontiers of biomedical sciences. Several **RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW** positions are available in the immunological and molecular biological studies of

- (i) HTLV-III and AIDS,
- (ii) growth factors and immunoregulatory factors, and
- (iii) the nervous system

The center will locate to a new, permanent building in the harmonious and beautiful Houston suburb, The Woodlands, in 1986.

Innovative, self-motivated immunologists, cell and molecular biologists please write: Dr. Tse-wen Chang, Professor of Biotechnology, Head, Hybridoma Division, or Dr. Nancy Chang, Associate Professor of Biotechnology, Head, Recombinant DNA Division, Center for Biotechnology, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030.

An Equal Opportunity Affirmative Action Employer

LECTURERS

State University of New York (SUNY) Purchase seeks 2 lecturers trained in natural or social sciences or the humanities to teach in a core program, "Revolution in Western Thought." Ph.D. and teaching experience required; arts training or experience preferred. Competitive salary, plus liberal benefits. Apply no later than 3 March 1986 to: Dr. Alfred Hunt, Box CORE, Affirmative Action Office, SUNY Purchase, Purchase, NY 10577. *Equal Opportunity Employer.*

POSITIONS OPEN

The University of Michigan Medical Center, Department of Surgery, seeks candidates for **TWO POSITIONS IN THE SECTION OF GENERAL SURGERY** with emphasis in Peripheral Vascular Surgery. Candidates should have an M.D. degree, A.B.S. certification, demonstrated skills as a clinical general surgeon, with special interest and experience in caring for patients with peripheral vascular disease, prior teaching and laboratory experience. Send curriculum vitae and names of three references to: James C. Stanley, M.D., Professor of Surgery and Head, Division of Peripheral Vascular Surgery, Section of General Surgery, The University of Michigan Hospitals, D2241 Medical Professional Building, Box 046, Ann Arbor, Michigan 48109. *The University of Michigan is a nondiscriminatory, Affirmative Action Employer. PCN's 29, 141.*

TRUDEAU INSTITUTE

A position is available for an **IMMUNOLOGIST** interested in establishing a program in basic cellular immunology, transplantation immunology, tumor immunology, or immunity to infectious diseases. The appointment will be made at the level of assistant or associate professor, depending on the amount of postdoctoral experience and publication record. Preference will be given to applicants interested in immunoregulation. No teaching is required. The successful applicant will be guaranteed 3 to 5 years of support, depending on the level of appointment, but will be expected to compete for outside funding. Campus housing is available.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. It is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

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

MARKETING MANAGER ATLAS/ENCYCLOPEDIA DIVISION

This is an exciting start-up opportunity for a marketing professional with a background in the scientific publishing field. Position has primary responsibility for developing and implementing marketing plans for a series of innovative science information products. Offers involvement with market research, product planning, advertising, promotion, and ongoing program management. Will organize direct mail campaigns including oversight of design and copywriting, list selection and production.

Requires at least 3 years of experience in marketing and promotion of scientific publications to an academic and research audience. B.A. in marketing or communications with journal experience preferred. Background should include copywriting or mailing list development for scientific/technical market, market survey development, and analysis or design of direct mail and space advertising campaigns. Competitive salary and benefits package including dependent care assistance for onsite child care center. Send résumé to: Manager, Professional Staffing, Human Resources Center, Institute For Scientific Information, 3501 Market Street, Philadelphia, PA 19104. *Equal Opportunity/Affirmative Action Employer.*

LABORATORY ANIMAL VETERINARIAN for the Division of Laboratory Animal Medicine in the School of Medicine, University of Pennsylvania. Responsibilities include health care to laboratory animals, research assistance to investigators and teaching to students, veterinarians, and technicians. Emphasis will be placed on developing research and funding in areas of comparative medicine. Preference will be given to candidates with documented achievement in pathology, virology, immunology, surgery, or radiology. Send résumé to: Dr. Moshe Shalev, Director, Division of Laboratory Animal Medicine, University of Pennsylvania, School of Medicine, 79 Medical/Laboratories/G3, 36th and Hamilton Walk, Philadelphia, PA 19104-6066. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MOLECULAR BIOLOGIST

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE, Ph.D. or M.D., with experience in nucleic acid biochemistry, recombinant DNA, and tissue culture. Project concerns structure, regulated expression, and analysis of disease-causing mutations in genes for steroidogenic cytochrome P450 enzymes. Send curriculum vitae and letters of reference to: Dr. Walter L. Miller, Laboratory of Molecular Biology, Room 677-Science, University of California, San Francisco, CA 94143.

MOLECULAR/CELL BIOLOGISTS

The Department of Zoology, University of Toronto, invites applications from those who wish to be sponsored for a NSERC University Research Fellowship (URF) in the field of molecular/cell biology. Preference will be given to individuals familiar with recombinant DNA technology. The department is committed to develop a centre of excellence in this area and is prepared to sponsor 3 URF's who have demonstrated research excellence. Well-equipped facilities will be made available. Salary will be at the assistant professor level. Candidates should send applications with full curriculum vitae, brief statement of research plans, and arrange for three letters of recommendations to be sent to: Dr. Arthur Zimmerman, Department of Zoology, University of Toronto, Toronto, Ontario, Canada M5S 1A1. *In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.*

NEUROLOGIST/CLINICAL NEUROPHYSIOLOGIST/EPILEPTOLOGIST—Direct EEG Department and Comprehensive Epilepsy Program. Major interest in research and the surgical treatment of epilepsy. Board-certified in neurology and electroencephalography (ABQEEG). Previous experience essential, including EEG and video monitoring and electrocorticography. Send curriculum vitae and a simple statement of interest to: Dr. Robert S. Dow, Good Samaritan Hospital and Medical Center, 1040 NW 22nd Avenue, Portland, Oregon 97210. *Good Samaritan Hospital and Medical Center is an Equal Opportunity/Affirmative Action Employer.*

NUTRITIONAL RESEARCH SCIENTIST

Our planned rapid growth has created an additional position for a research scientist. Qualified candidate must possess a doctoral degree in biochemistry, nutritional biochemistry, physiology, or areas related to lipid metabolism and nutrition in man and animal models. Four to 6 years of postdoctoral experience required. Current research program includes evaluation of metabolic change in protein, carbohydrates and lipids in patients, and animal models following trauma and sepsis. Cancer research included. Will be responsible for maintenance of an externally funded research program of his/her interest. Qualified candidates please submit curriculum vitae with salary requirements in complete confidence to:

The Baptist Medical Centers
Department of Human Resources
P.O. Box 30040
Birmingham, Alabama 35222
Equal Opportunity Employer

TRUDEAU INSTITUTE

A **POSTDOCTORAL POSITION** is available to study the immune response to tumors as a model of immunoregulation. Candidates with training in cellular immunology and interested in employing in vitro assays to analyze in vivo models of successful and unsuccessful immune responses should apply. A competitive salary and fringe benefits are offered and institute housing will be made available. Future employment is possible, depending on performance.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. It is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

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

SECTION HEAD Natural Products

The Squibb Institute for Medical Research is recognized as an international leader in the research and development of pharmaceutical products. We are currently seeking an individual to direct the characterization, chemical isolation and bioanalytical groups within our natural products research program.

The primary responsibility of this position will be progressing natural product leads developed from the microbial screening program. This will be carried out through the direct supervision of a multidisciplinary team consisting of microbiologists, analytical chemists and organic chemists (isolation and structure determination).

Qualified candidates will have a Ph.D. in Chemistry or Biochemistry with 7-10 years of relevant postdoctorate experience. A broad background in biochemistry and analytical techniques is desirable. Strong supervisory skills are essential.

This position is located at our International Headquarters in Princeton, NJ; a pleasant semi-rural setting convenient to New York City and Philadelphia. We offer the opportunity for exceptional scientists to pursue stimulating careers.

For confidential consideration, please submit your resume to: The Squibb Institute for Medical Research, Human Resources Department KC-SH, P.O. Box 4000, Princeton, NJ 08540. An equal opportunity employer.



SQUIBB

Where science comes to life

Postdoctoral Scientist Endothelial Cell Biology/ Vascular Pharmacology

Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to work with Dr. Barry A. Berkowitz in an environment designed to foster creative innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community.

Our postdoctoral appointments are normally of 2 years duration. The successful candidate will undertake an independent program in endothelial cell biology and vascular pharmacology.

Candidates are required to have:

- a Ph.D./MD in Cell Biology, Biochemistry or Pharmacology with 0-2 years postdoctoral experience.
- a strong background and experience in tissue culture: endothelial cell, vascular smooth muscle.
- an interest in mechanism of vascular contraction and relaxation; vascular pharmacology.
- excellent academic record and communications skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1576 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

A SmithKline Beckman Company

Research Managers

Expand the Scope of Biotechnology Research.

The Agricultural Division of CIBA-GEIGY, one of the world's foremost agricultural and specialty chemicals companies, is respected for both the quality of its research and for the highly accomplished scientists it attracts. To maintain our position as an industry leader, we are seeking research professionals to join our staff at our facility which is dedicated to plant biotechnology, located in the stimulating environment of Research Triangle Park, N.C.

Research Manager, Microbiology

We seek a leading scientist with a national reputation as an expert in plant microbiology or microbial genetics to manage vital research in the area of MOLECULAR BIOLOGY OF PLANT-BACTERIAL INTERACTION. The successful candidate will have a Ph.D. in Microbiology, Molecular Biology, Plant Pathology, or a related discipline, and 5-10 years' experience in industrial or academic research funded by competitive grants. We also require evidence of exceptional ability to direct the research efforts of a group of Ph.D. and M.S. level scientists, as well as a strong record of refereed publications.

Research Manager, Biochemistry

We are also seeking a prominent research biochemist with demonstrated expertise in plant biochemistry/physiology emphasizing PLANT GENE EXPRESSION to participate in and coordinate the research efforts of scientists at the Ph.D. and M.S. levels. The successful candidate will have a Ph.D. in Chemistry, Biochemistry or Molecular Biology and 5-10 years' experience as an independent investigator in an academic or industrial setting. In addition, we require demonstrated ability to coordinate research activities as well as an understanding of, and experience in, a variety of biochemical and molecular genetic disciplines.

In return for your expertise, you'll receive an excellent salary, a comprehensive benefits package and the opportunity to contribute to a highly professional and innovative environment. For prompt and confidential consideration, please forward your curriculum vitae (indicating position of interest) and a list of publications to: Dr. Mary-Dell Chilton, Agricultural Biotechnology Research Unit, CIBA-GEIGY Corporation, P.O. Box 12257, Research Triangle Park, NC 27709-2257. An Equal Opportunity Employer m/f/h/v.

CIBA-GEIGY

Progress Through Innovation

POSITIONS OPEN

MOLECULAR BIOLOGY OF LIPOPROTEINS AND LIPID RELATED ENZYMES: Research position for a molecular biologist with several years of relevant experience available. Candidates should send curriculum vitae to: **Dr. A. G. Motulsky, Chairman, Search Committee, Center for Inherited Diseases, University of Washington, Seattle, WA 98195.**

TEMPLE UNIVERSITY DEPARTMENT OF BIOLOGY Molecular Biology—Genetics

The Department of Biology is expanding its program in molecular biology and genetics. We invite applications for a tenure-track academic appointment at the assistant professor level to begin either 1 July 1986, or 1 January 1987. The successful candidate will also hold an appointment in the university's Institute of Molecular Biology and Genetics. Preference will be given to a molecular biologist working on gene expression in prokaryotes and/or viruses. The appointee is expected to maintain an independent research program and to contribute to graduate and undergraduate education and training in his/her area of specialization. All candidates are expected to have postdoctoral experience. Applicants should send curriculum vitae, representative publications, a summary of their previous and proposed research, and the names and addresses of three references to:

Dr. Nina W. Hillman
Department of Biology 015-00
Temple University
Philadelphia, PA 19122

Closing Date: 30 April 1986. Applications will be reviewed upon receipt. *Temple University is an Equal Opportunity/Affirmative Action Employer.*

University of California, Los Angeles Mental Retardation Research Center, Neurophysiology and Neuroanatomy Group. There will be a vacancy in the Mental Retardation Research Center for a **NEUROPHYSIOLOGIST** and/or **NEUROANATOMIST**. The individual selected should have a first rate research record, strong current extramural competitive grant funding, and the ability to interact with scientific colleagues at a senior level. We are looking for a scientist whose main interests are in development of the mammalian central nervous system. Laboratory space, setup funds, and excellent university salary and benefits are available. The successful candidate must assume the position by 1 July 1987. Write with names of three references to:

Dr. N. Buchwald
Mental Retardation Research Center
Neuropsychiatric Institute, UCLA
760 Westwood Plaza, Los Angeles, CA 90024
UCLA is an Equal Opportunity/Affirmative Action Employer.

PHYSICAL OCEANOGRAPHER. The Graduate School of Oceanography at The University of Rhode Island invites applications for a research faculty position in physical oceanography. We are primarily interested in candidates with theoretical and/or numerical modeling experience at the assistant professor level, but the level of the appointment will depend on the qualifications of the applicant. Applicants must have a Ph.D. degree and have shown excellence and independence in their research. Some start-up funds are available, but within a reasonable period of time the candidate is expected to develop their own program of funded research. Our department is actively involved in studies of western boundary currents, stability properties of frontal systems, eddy transport processes in energetic and quiet ocean regions, equatorial oceans, and ocean-atmosphere exchange processes. Please send application including curriculum vitae, a statement of research interests, and names of three references by 21 March 1986 to: **Professor Thomas Rossby, Physical Oceanographer (090325) Position, THE UNIVERSITY OF RHODE ISLAND, P.O. Box 357, Kingston, RI 02881-0357. An Affirmative Action/Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITION available immediately to study the transcriptional regulation of human liver genes during the acute phase response. Background in nucleic acid biochemistry, especially transcriptional analysis, would be helpful. Send curriculum vitae and names and addresses of three references to: **Dr. David Perlmuter, Division of Cell Biology, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115.**

POSITIONS OPEN

ORAL MEDICINE—NEW YORK DENTAL EDUCATOR

New York University College of Dentistry invites applications for a full-time, faculty position at the rank of assistant/associate professor in the Department of Oral Medicine, effective immediately. Applicants must have a dental degree and advanced training (Ph.D. preferred) in either immunology, microbiology, oral biology, oral medicine, or pathology. Applicant is expected to develop a vigorous dental research program, compete for external research funds, and teach clinical and didactic oral medicine. Salary and academic rank will be commensurate with credentials and experience. Please submit curriculum vitae, immediately to: **NEW YORK UNIVERSITY DENTAL CENTER, College of Dentistry, 345 East 24 Street, 1st Floor, New York, NY 10010. Attention: Barry R. Riskin, DDS, Ph.D., Chairman, Department of Oral Medicine. New York University is an Equal Opportunity/Affirmative Action Employer.**

PALEONTOLOGIST

The Department of Geology of the University of Oregon invites applications for a faculty position as visiting assistant professor in the general area of paleontology. Appointment at a more senior rank will be considered only in the case of applicants desiring this position during sabbatical leave from their own institute. The exact area of expertise is less important than are demonstrated and potential achievement in research and teaching. The department currently includes two paleontologists, two additional faculty in allied areas of sedimentary geology, and five participating faculty from other departments. In addition to a variety of laboratory facilities for modern paleontological research, the department maintains the Condon Collection, Oregon's leading collection of fossils, rich in type material of Tertiary mammals. This appointment is initially for four academic terms (September 1986 to December 1987), after which it will be reconsidered. The deadline for applications is 15 April 1986, but late applications will be considered until the position is filled. Candidates should send an outline of their research and teaching aims, together with the names, addresses, and telephone numbers of three referees, curriculum vitae, and selected reprints of professional publications to: **Dr. G. J. Retallack, Department of Geology, University of Oregon, Eugene, OR 97403. Minimum salary, \$24,000.**

The University of Oregon is an Equal Opportunity/Affirmative Action Institution.

The Biology Department of Vassar College seeks applicants for a 3-year position beginning in the academic year 1986 to 1987. Applicants must be **PHYSIOLOGICAL ECOLOGISTS** with expertise in plant physiology. Teaching load will include general botany, introductory biology, ecology, and plant physiology. A Ph.D. is required; postdoctoral and teaching experience is desirable. Send curriculum vitae and three letters of references by 10 March 1986 to: **Chairman of Biology, Box 251, Vassar College, Poughkeepsie, NY 12601. Affirmative Action/Equal Opportunity Employer.**

PHYSIOLOGICAL PSYCHOLOGIST. The University of Wisconsin, Department of Psychiatry, is seeking to fill a project associate opening. This position is full time, with an initial appointment through June 1987, renewable annually. The applicant should have a doctorate in physiological psychology or a related area and 2 years of postdoctoral experience. The appointee will be expected to help sustain an ongoing research program in the area of controllability of stress and the relationship to endocrine, autonomic, and behavioral systems in rats. Candidates should send curriculum vitae by 1 March 1986 to: **Ned Kalin, M.D., Wm. S. Middleton Veterans Hospital, 2500 Overlook Terrace, Madison, WI 53705.**

POSTDOCTORAL POSITIONS available immediately to study the molecular genetics of early mammalian development. Specific research areas include the use of teratocarcinoma stem cells, and homeobox genes to study mouse embryogenesis and gametogenesis. Experience in molecular biology, cell biology, or somatic cell genetics is required. Interested individuals should send curriculum vitae and reference to: **Dr. Chi Nguyen-Huu, Departments of Microbiology and Urology, Columbia University College of Physicians and Surgeons, 630 West 168 Street, New York, NY 10032. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

CALTECH MOLECULAR EVOLUTION

POSTDOCTORAL to study evolution of the genome and its organization at Kerckhoff Marine Laboratory. **LABORATORY TECHNICIAN** with training in molecular biology also required. Salary according to experience. Respond to: **Dr. Roy Britten, Kerckhoff Marine Laboratory, 101 Dahlia Avenue, Corona del Mar, CA 92625. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOW to study regulation of human Ij-1a function. NIH-level salary and fringes. Instructorship for advanced candidate. **Robert Humphreys, Pharmacology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605. An Affirmative Action/Equal Opportunity Employer.**

The **AUSTRALIAN NATIONAL UNIVERSITY** invites applications from suitably qualified men and women for appointment as **POSTDOCTORAL FELLOW IN THERMODYNAMIC STUDIES OF SHEET-SILICATE MINERALS IN GEOTHERMAL AND HYDROTHERMAL SYSTEMS, DEPARTMENT OF GEOLOGY, FACULTY OF SCIENCE.** The successful applicant will be involved in a number of alteration studies of geothermal and hydrothermal systems and in the development of thermodynamic models of the common sheet-silicate minerals in these systems. The aim of the work is to utilize the nonstoichiometry of sheet-silicates to elucidate physicochemical environments in hydrothermal systems. Applicants should hold a Ph.D. degree in field(s) relating to the project, and preferably have a strong interest in the use of thermodynamics in ore-genesis studies. The appointment will be for 3 years. Closing date: 6 March 1986. Reference: FS.15.1.2. Salary will be in accordance with qualifications and experience within the range: Postdoctoral fellow grade 1 (at a fixed point), \$23,473 to \$26,889 per annum; current exchange rate: A\$1 = US\$ 0.68. Grants may be provided towards travel, assistance with housing, though special conditions may apply to persons appointed on externally funded positions. Superannuation. Maternity leave is available. The university reserves the right not to make an appointment or to make an appointment by invitation at any time. Applicants should quote the reference number when submitting applications to: **R. V. Dubs, Registrar, GPO Box 4, Canberra, ACT, 2601 Australia. The University is an Equal Opportunity Employer.**

UNIVERSITY OF ARIZONA—DEPARTMENT OF BIOCHEMISTRY POSTDOCTORAL AND GRADUATE STUDENT POSITIONS IN PLANT MOLECULAR BIOLOGY available immediately. The project involves (i) the biochemical and immunological study of a metabolic pathway which is induced by salt-drought stress, (ii) the characterization of genes which are transcriptionally controlled during stress induction, and (iii) the assembly of chimeric genes, plant transformation and physiological studies of regenerated transformants. Candidates with a strong background in biochemistry and molecular biologists with an interest in plant biochemistry are encouraged to apply. Please send curriculum vitae and three letters of recommendation to: **Dr. Hans J. Bohnert, Department of Biochemistry, BioSciences West, University of Arizona, Tucson, AZ 85721. The University of Arizona is an Affirmative Action/Equal Opportunity Employer. Closing date for this position is 31 March 1986.**

POSTDOCTORAL POSITIONS to study biochemical control of testicular function using recombinant DNA and receptor methodologies; uterine contractility measuring changes in intracellular CA^{2+} and phosphoinositide metabolism or myosin light chain and light chain kinase phosphorylation. Send curriculum vitae and references to: **Dr. B. Sanborn, Department of Biochemistry and Molecular Biology, University of Texas Medical School Houston, P.O. Box 20708, Houston, TX 77225. An Equal Opportunity Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL POSITION available immediately for the study of cholesterol metabolism using biochemical and immunological approaches. Candidate should have Ph.D. and experience in protein purification or monoclonal antibody production. Send curriculum vitae and names of three references to: **Dr. Laura Liscum, Department of Physiology, Tufts University School of Medicine, Boston, MA 02111.**



Western Research Institute is growing in response to new demands for its services. Our demonstrated capabilities in fossil energy are stimulating domestic and international interest. In environment, WRI is addressing energy related and hazardous waste issues as customer and regulatory agency concern for solving these problems heightens. To facilitate our response to these developments, we are seeking an accomplished professional as Director of Marketing.

The individual we select will be a superior communicator/team player/leader and will possess a complement of the following: demonstrated knowledge of Marketing theory and practice; experience developing and/or marketing research programs; familiarity with energy and environment markets; an MBA, BBA, or related technical degree (e.g., Environmental Sciences, Chemistry).

This unique career opportunity also features an excellent quality of life in a university, small community atmosphere surrounded by abundant Rocky Mountain recreation. Please send your resume with salary requirements to Manager, Human Resources, WESTERN RESEARCH INSTITUTE, University of Wyoming Research Corporation, P.O. Box 3395, University Station, Laramie, WY 82071. WRI is an equal opportunity employer.

Postdoctoral Scientist Immunology

The Immunology and Antinfectives Therapy Department of Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to participate in a Lymphokine Biology research program in an environment designed to foster creative innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community. Our postdoctoral appointments are normally of 2 years duration.

The successful candidate will:

- conceive, plan and conduct experimental research directed toward the development of receptor-binding assays for lymphokines.
- participate in the study of biology of interleukin-1 receptor and the regulation of its expression in disease states where interleukin-1 is implicated.

Candidates are required to have:

- a Ph.D. in Cell Biology or Biochemistry with 0-3 years postdoctoral experience.
- experience with ligand-receptor binding assays and signal transduction mechanisms.
- a good publication record.
- clear and concise communication skills.
- the ability to interact cooperatively with a multidisciplinary research team.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1598 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

HEAD, MATHEMATICAL SCIENCES DIVISION

The Office of Naval Research is seeking an outstanding individual to serve in this Federal Senior Executive Service (SES) position. Salary range is \$61,296 to \$68,700, depending on qualifications. (In addition to salary, career SES appointees are eligible to compete for performance awards and bonuses.)

The Head, Mathematical Sciences Division supervises senior Scientific Officers plus support personnel and is responsible for providing leadership, direction, and coordination for the \$25M Contract Research Program in mathematical sciences. Duties include program planning, program execution, assessment of program accomplishments, and exploitation of results

in applications to Navy technology. Scientific and technical areas of concern include, but are not limited to, pure and applied mathematics, numerical analysis, statistics, probability, operations research and computer science.

Candidates should possess a Ph.D. or equivalent in the area of mathematics and significant research accomplishments in one or more of the above disciplinary areas.

Interested persons should submit a resume or Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to:

Office of the Chief of Naval Research
Civilian Personnel Division, Code 01242P
Attn: Announcement #86-02
800 North Quincy Street
Arlington, VA 22217-5000



U.S. Citizenship Required
An Equal Opportunity Employer

Applications will be accepted through 15 April 1986 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

POSITIONS OPEN

POSTDOCTORAL POSITION Pathobiological Chemistry Laboratory Shriners Hospital for Crippled Children Oregon Health Sciences University 3101 SW Sam Jackson Park Road Portland, OR 97201

Postdoctoral position available immediately for recent Ph.D. to develop and exploit monoclonal antibodies to human collagens and other connective tissue proteins. Prior experience with cell culture and immunologic techniques required, and previous experience with monoclonal antibodies, immunofluorescent, or EM immunolocalization techniques desirable. Competitive salary, dependent upon qualifications. Please send application with names of three referees to: **Dr. David W. Hollister at the above address.**

THE SAMUEL ROBERTS NOBLE FOUNDATION BIOMEDICAL DIVISION has postdoctoral openings in:

BIOCHEMICAL PHARMACOLOGY—**Dr. David Ringer**, senior investigator. Enzyme markers of chemical carcinogenesis; protein purification (FPLC/HPLC); Ab production (poly/mono clonal) and studies involving the nuclear organization of DNA replication (nuclear matrix/replisome complex) and function of DNA modification (5 methyl cytosine/carcinogen adducts).

CELL BIOLOGY—**Dr. Robert T. Dell'Orco**, senior investigator. Chromatin structure and aging research using human diploid cells in culture.

IMMUNOLOGY—**Dr. Richard W. Leu**, senior investigator. Interrelated roles of interferon(s), IgG, complement, and their receptors on macrophage activation to mediate enhanced tumoricidal effector functions.

PROTEINS—**Dr. M. K. Patterson, Jr.**, senior investigator. Regulation and expression of enzyme postulated to be involved in growth control. Experience in mRNA, library screening, sequencing, and gene cloning.

A 2-year appointment with full employee benefits, including paid family health and dental insurance with housing or allowance. Salary: \$18,000 to 20,000. Privately funded research institute located in Southern Oklahoma equidistant to Dallas-Ft. Worth and Oklahoma City.

Send résumé and references to: **Director, Biomedical Division, Samuel Roberts Noble Foundation, P.O. Box 2180, Ardmore, Oklahoma 73402.**

POSTDOCTORAL POSITION IN GENETIC EPIDEMIOLOGY. We are looking for an individual with a strong background in human population genetics, quantitative genetics, or epidemiology and interest in genetic mediation of disease susceptibility, to collaborate with investigators in our Population Genetics Laboratory (Drs. Jean W. MacCluer, Candace M. Kammerer, and Bennett Dyke). Ongoing projects include linkage studies of single gene defects in man; an investigation of genetic factors contributing to susceptibility to atherosclerosis in pedigree baboons; and evaluations of methods of genetic analysis using computer-simulated data. Experience with complex segregation analysis and linkage analysis desirable. Please send résumé and names of three references by 7 March 1986 to: **Personnel Director, Southwest, Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284. Equal Opportunity Employer, M/F.**

RESEARCH ASSOCIATE Pathobiological Chemistry Laboratory Shriners Hospital for Crippled Children 3101 SW Sam Jackson Park Road Portland, OR 97201

Research associate position available immediately for recent Ph.D. for biochemical studies of human connective tissue diseases. Previous experience in protein biochemistry and mammalian cell culture required, and prior work with connective tissue proteins, molecular biology, or monoclonal antibodies desirable. Competitive salary, dependent upon qualifications. Please send application with names of three referees to: **Dr. David W. Hollister at the above address.**

POSITIONS OPEN

POSTDOCTORAL POSITION— RICE UNIVERSITY

The Department of Biochemistry announces the availability of a postdoctoral position in the area of metalloprotein structure and function. Previous experience in one of the following areas would be an advantage: purification and/or characterization of membrane-bound enzymes, mitochondrial electron transport proteins, bioinorganic spectroscopy. Interested individuals should send a complete résumé, together with the names of three individuals who are willing to provide references for the applicant. All information should be sent to: **G. Palmer, Biochemistry Department, Rice University, P.O. Box 1892, Houston, Texas 77251.** Rice University seeks to attract to its faculty, staff, and student body qualified persons of diverse backgrounds. *In accordance with this policy, Rice does not discriminate in admissions, educational programs, or employment against any individual on the basis of sex, race, color, religion, age, national or ethnic origin, or handicap. University policy also includes affirmative action in seeking to attract to Rice women, minority group members, handicapped individuals, and veterans.*

POSTDOCTORAL POSITIONS available in a multidisciplinary laboratory that is studying the effects of synthetic inhibitors of S-adenosylhomocysteine hydrolase on the purified prokaryotic and eukaryotic enzymes, on the cellular metabolism of nucleosides and nucleotides, on virus replication, and on viral and cellular S-adenosylmethionine-dependent transmethylation. Interested candidates should have a Ph.D. degree in biochemistry, molecular pharmacology, or related discipline. Some experience in cell culturing techniques would be preferred. Send curriculum vitae and the names and addresses of three references to: **Dr. Ronald T. Borchart, Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66045. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available summer 1986 to work on genes and enzymes involved in purine biosynthesis and one-carbon metabolism (write for further description of past and proposed research). Salary Range: \$16,000 to 18,000 per year, depending on qualifications. Initial appointment for 12 months, with possibility of reappointment for up to 2 additional years. Ph.D. in biochemistry or microbiology or molecular biology preferred. Send curriculum vitae and names of two references by 15 April to: **Jesse C. Rabinowitz, Department of Biochemistry, University of California, Berkeley, CA 94720. University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY/BIOCHEMISTRY. A postdoctoral position is currently available (through an NIH grant). The research area involves nucleic acid-protein interactions and DNA replication in the herpes simplex virus system. Send curriculum vitae to: **Dr. William Ruyechan, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, Bethesda, MD 20814-4799.**

POSTDOCTORAL POSITION available for recent Ph.D. or M.D. with experience in protein purification and training in cell or molecular biology. Project involves isolation of cell surface receptors involved in adhesion and migration of metastatic tumor cells. Reply to: **Dr. Bruce Zetter, Harvard Medical School, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS IN REPRODUCTIVE BIOLOGY

The Reproductive Biology Program at Colorado State University has immediate openings for postdoctoral fellows (salary \$16,000 to \$22,000 per year). Training is offered in female and male reproductive endocrinology; neuroendocrinology; cell biology; ovarian function, testicular and epididymal physiology; fertilization, culture, surgical manipulation, and transfer of embryos; and mechanisms of steroid, peptide, and protein hormone action. Interested candidates should send curriculum vitae and three letters of recommendation to: **Dr. Gordon Niswender, Department of Physiology and Biophysics, Colorado State University, Fort Collins, Colorado 80523. Colorado State University is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office: 314 Student Services Building.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the effects of anticholinesterase agents on autonomic ganglionic transmission. Techniques include single and double microelectrode voltage clamp, whole cell and single channel recording using the patch clamp technique, and ultrastructural analysis of single ganglion cells. Experience in electrophysiology desired. Send curriculum vitae and the names of three references to: **Dr. Jerome Fiekers, Department of Anatomy and Neurobiology, University of Vermont College of Medicine, Burlington, Vermont 05405.**

POSTDOCTORAL POSITION available beginning 1 April 1986 to study the molecular basis of morphological abnormalities in certain families of transgenic mice. Candidates should have a Ph.D. in molecular or developmental genetics, and should have experience working with recombinant DNA. Salary: \$19,000 per year. Send curriculum vitae, description of research interest, and three letters of recommendation to: **Dr. Paul Overbeek, Howard Hughes Medical Institute, Department of Cell Biology, Baylor College of Medicine, Houston, TX 77030.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately to study the biochemistry and molecular biology of juvenile hormone and cytochrome P-450 in insects. Training and experience in molecular biology desirable. Application deadline is 31 March 1986. Send curriculum vitae and names of three references to: **Dr. R. Feyereisen, Department of Entomology, Oregon State University, Corvallis, OR 97331. Oregon State University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to develop immunochemical methodologies to measure cellular DNA damage. Active molecular biology group engaged in research on the production and repair of DNA damage. Send curriculum vitae and the names of three references to: **Dr. Susan Wallace, Department of Microbiology and Immunology, New York Medical College, Valhalla, New York 10562. Telephone: 914-993-4197.**

POSTDOCTORAL RESEARCH ASSOCIATE

Required Education and Experience: M.D. or Ph.D. degree, experience in biochemical and recombinant DNA technology preferred. Candidate will participate in the ongoing research program on regulation of gene expression and carcinogenesis.

Submit résumé, brief summary of research experience, and three references.

Send application to:

**Dr. Debajit K. Biswas
Harvard School of Dental Medicine
188 Longwood Avenue
Boston, MA 02115
Telephone: 617-732-1475**

POSTDOCTORAL RESEARCH ASSOCIATES

Interdisciplinary program supported by NIH training grant offers research in liver carbohydrate metabolism (J. B. Blair, Ph.D., Biochemistry); Stimulus-Secretion Coupling (F. R. Butcher, Ph.D., biochemistry); pituitary-ovarian function (R. L. Butcher, Ph.D., obstetrics/gynecology); adrenal/hepatic monooxygenases (H. D. Colby, Ph.D., physiology); gonadotropins and follicular development (R. A. Dailey, Ph.D., animal science); reproductive neuroendocrinology (R. L. Goodman, Ph.D., physiology); thyroid/adrenal neuroendocrinology (G. A. Hedge, Ph.D., physiology); utero/ovarian relationships (E. K. Inskeep, Ph.D., animal science); gene expression/recombinant DNA (R. F. Kletzein, Ph.D., biochemistry); androgen/estrogen action (M. G. Ma-whinney, Ph.D., pharmacology and toxicology); and hormonal regulation of gene expression/recombinant DNA (Jeanine Strobl, Ph.D., pharmacology and toxicology). Positions filled as available, depending on candidate qualifications and needs of laboratories involved. Application information and more detailed descriptions of these research programs are available on request from:

**Dr. George A. Hedge
Professor and Chairman
DEPARTMENT OF PHYSIOLOGY
WEST VIRGINIA UNIVERSITY
MEDICAL CENTER
Morgantown, West Virginia 26506-6302
Equal Opportunity/Affirmative Action Employer**

SCIENTISTS

Program Resources, Inc. has immediate openings for the following scientists in the NCI-Frederick Cancer Research Facility, Frederick, MD.

MOLECULAR BIOLOGISTS

We have two positions available for molecular biologists.

In the first position, the successful candidate will have a PhD in molecular biology or biochemistry with experience in recombinant DNA technology. As a team member of the Laboratory of Cell and Molecular Structure, responsibilities include the pursuit of new cloning projects and projects in progress using DNA sequencing, molecular cloning, restriction enzyme mapping, preparation and screening of genomic libraries, cDNA preparation, expression vectors, and DNA and RNA characterization.

In the second position, the qualified candidate will have a PhD in molecular biology-biochemistry and experience in RNA and DNA manipulation techniques. Protein experience (westerns) desirable. As a member of the Pre-clinical Screening Laboratory's broad based screening program, responsibilities include the study of BRM mediated gene expression; specifically, oncogene, MHC, and TAA especially as related to the metastatic process. In addition, specific probes will be used to study immune regulation and BRM regulation of cytokine expression.

BIOCHEMIST/CELL BIOLOGIST

The successful candidate will have a PhD in biochemistry or cell biology with experience in immunology including: affinity columns, immunoprecipitation, western blotting, protein isolation and characterized, and antibody production and manipulation. Responsibilities include participation in multidisciplinary projects with other working groups in molecular and cell biology as part of the Laboratory of Cell and Molecular Structure.

MD/SCIENTIST

The successful candidate will have an MD or PhD. As part of the Biological Response Modifiers Program, responsibilities are to provide research in cellular and molecular mechanisms of biological response modifiers activity in human and animal cancer immunotherapy.

Program Resources, Inc. offers a salary commensurate with training and education and a comprehensive benefits program including a 401(K) Retirement Plan and relocation assistance.

For consideration, send a curriculum vitae, salary requirements, and three letters of reference to:



Program Resources, Inc.
Personnel Department
P.O. Box B
Frederick, MD 21701
Equal opportunity employer, M/F

RESEARCH POSITIONS

WITH THE BIOTECHNOLOGY DIVISION OF AMOCO CORPORATION

The Amoco Research Center has exciting career opportunities available for individuals to join our expanding research programs in DNA probe diagnostics.

RESEARCH SCIENTIST (MICROBIOLOGY/VIROLOGY)

Candidates will be involved in the development and commercialization of DNA probe diagnostics. Applicants should have a strong research record in Microbiology and be able to demonstrate ability and achievements in the development of assays for the rapid diagnosis of infectious disease. Expertise must include the growth and characterization of a variety of human pathogens. Strong background in current technologies for the diagnosis of infectious disease is required. Molecular biology background is highly desirable. Applicants must possess a PhD and have at least 2 years of Post-Doctoral and/or Industrial experience.

RESEARCH SCIENTIST (BIOCHEMISTRY/MOLECULAR BIOLOGY)

Candidate must have a thorough background in immunodiagnostic or nucleic acid diagnostic assay development. Previous experience with non-radioisotopic detection methods and enzyme conjugation highly desirable. Ideal applicant would be able to demonstrate ability and recent achievements using DNA probe hybridizations or gene detection. Postdoctoral or 2-5 year industrial experience required.

Resumes for these positions should be forwarded to the attention of the Professional Recruiting Coordinator.

RESEARCH ASSISTANTS

We are seeking highly qualified individuals to assist in the development and commercialization of DNA probe diagnostics. Candidates should have a BS or MS degree and 1-3 years of post-degree academic or industrial experience. Special consideration will be given to individuals with training and experience in the areas described.

Resumes for this position should be forwarded to the attention of the Support Staff Recruiter.

These positions offer the distinct advantage of working with a top flight team of professionals and both personal and professional advancement. Selected candidates will receive salaries commensurate with experience and a comprehensive benefits package. All replies will be held in strictest confidence.



AMOCO RESEARCH CENTER
P.O. Box 400, Dept. JML/2-21
Naperville, IL 60566

An Equal Opportunity Employer M/F/H

POSITIONS OPEN

POSTDOCTORAL IN PINE MOLECULAR GENETICS: Ph.D. in molecular or forest genetics with working knowledge of contemporary/conventional research in southern pines. Research to focus on understanding the genetic bases for trait performance. Salary up to \$25,000 per 12 months is available until 1 September 1988. Send curriculum vitae, transcripts, and names of three references to: **Dr. R. J. Newton, Forest Science Department, Texas A&M University, College Station, Texas 77843-2135. An Equal Opportunity, Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately for a **protein biochemist/molecular biologist** to study insulin-like growth factors in chickens. Experience in protein purification and characterization, radioimmunoassay, radioreceptor assay, cell/tissue culture, and recombinant DNA techniques desirable. Send curriculum vitae, research interests, and three letters of reference to: **Dr. Larry A. Cogburn, Department of Animal Science, Room 040 Townsend Hall, University of Delaware, Newark, DE 19717-1303. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral positions are available immediately for projects involving the site directed mutagenesis of the nitrogenase MoFe protein and the biosynthesis of the nitrogenase FeMo-cofactor. These are collaborative projects which involve the mutagenesis, overproduction, purification and biochemical analysis of nitrogen fixation specific genes and their products from *Azotobacter vinelandii*. Applicants should have extensive experience with recombinant DNA procedure or protein purification. Send summary of research experience and two letters of reference to: **Dennis R. Dean, Department of Anaerobic Microbiology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24060. Telephone: 703-961-5895. Deadline for applications: 31 March 1986. Virginia Tech is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH FELLOW

Three-year appointment, preferably beginning 1 July 1986, with training in cell biology and/or biochemistry (Ph.D. or M.D. with laboratory experience). Research on assembly and structure of normal and diabetic basement membranes using biochemical, immunochemical, and molecular morphological techniques. Send curriculum vitae to: **Dr. Peter D. Yurchenco, Department of Pathology, University of Medicine and Dentistry of New Jersey-Rutgers Medical School, Piscataway, NJ 08854. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

POSTDOCTORAL RESEARCH POSITION available immediately for person with cell biology/experimental pathology background to work on ongoing studies involving the characterization of vascular wall smooth muscle cell phenotypes and/or the ability of endothelial cells to participate in wound healing and smooth muscle proliferation. Salary will be according to NIH guidelines. Send curriculum vitae and the names of three references to:

**Dr. Michael A. Reidy
Department of Pathology, SJ-60
University of Washington
Seattle, WA 98195**

The Department of Kinesiology at the University of California, Los Angeles (UCLA) invites applications from individuals with **RESEARCH SPECIALTIES** in adaptation of membranes and receptors to exercise or in the area of molecular biology with an emphasis in exercise. This is a tenure-track position at the assistant professor level and is anticipated to start 1 July 1986. The appointee is expected to conduct an independent research program, teach in basic physiology and exercise physiology courses, and develop a graduate seminar in her/his area of specialty. Applicants must have a Ph.D. or M.D. degree, and have had at least 2 years of postdoctoral training or comparable experience. Submit curriculum vitae, including a statement of research interests to: **Professor R. James Barnard, Department of Kinesiology, 2871 Slichter Hall, UCLA, Los Angeles, CA 90024. Deadline for receipt of application is 1 April 1986.**

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

POSITIONS OPEN

REPRODUCTIVE BIOLOGY POSTDOCTORAL

Position available to study the role of a novel group of proteins and peptides in mammalian spermatogenesis. Applicant should have a strong background in protein purification (HPLC) and characterization. Excellent instrumentation is available. Send curriculum vitae and names of three references to:

**Dr. A. L. Kierszenbaum
Department of Anatomy and
The Laboratories for Reproductive Biology
The University of North Carolina at Chapel Hill
348 Swing Building 217-H
Chapel Hill, NC 27514
Telephone: 919-966-5263
An Equal Opportunity/Affirmative Action Employer**

The Department of Biochemistry and Molecular Biophysics at Columbia University, in conjunction with the Center for Structural Biology at Brookhaven Laboratory, is inviting applicants to apply for a **RESEARCH ASSOCIATE** position in structural biology to conduct research into the structure of Na, K-ATPase using neutron scattering, and synchrotron radiation techniques. The position is available immediately. Please send résumé and references to: **B. P. Schoenborn, Department of Biochemistry and Molecular Biophysics, Columbia University, 630 West 168 Street, New York, NY 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE

Due to an expansion of our Division of Gastroenterology, an opportunity exists for a research associate to join our university-affiliated hospital as director of G.I. Research. The successful candidate will have a Ph.D. in physiology or pharmacology, preferably with 2 years of postdoctoral research experience in studying motility of the G.I. tract using in vitro and in vivo techniques. The focus of research is to elucidate the mechanism of control of colonic myoelectric activity and contractility in various disease states.

We offer a professional work environment, salary commensurate with experience, and competitive benefits package. Interested candidates should submit curriculum vitae to: **Robert Burakoff, M.D., Chief, Gastroenterology Division,**

**WINTHROP-UNIVERSITY HOSPITAL
Established in 1896
As Nassau Hospital
Long Island's First Hospital
259 First Street
Mineola, Long Island, New York 11501
Equal Opportunity Employer, M/F/H**

RESEARCH SCIENTISTS

Dynamac Corporation, a growing environmental research firm, is seeking Ph.D. scientists who are interested in participating in a long-range basic research program on toxins of biological origin.

Experienced scientists with outstanding records of achievement in research, as evidenced by publications, training and experience, and demonstrated creativity in the following areas, are desired.

Neurochemistry, biochemistry, organic chemistry, neuropharmacology, pharmacology, protein chemistry, virology, parasitology, microbiology, molecular biology, and immunology.

Working experience with biological toxins is very desirable.

To apply, please send your curriculum vitae in confidence to:

**Dynamac Corporation
Personnel Department B-21-1
11140 Rockville Pike
Rockville, Maryland 20852**

STATISTICAL HUMAN GENETICIST: University of Washington Medical School; assistant professor level; experienced in advanced computer analysis of human linkage and segregation data. Send curriculum vitae and résumé of experience to: **A. G. Motulsky, Chairman, Search Committee, Center for Inherited Diseases, RG-25, University of Washington, Seattle, WA 98195. An Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH IN MOLECULAR BIOLOGY to study the role of the microsomal glucuronidase-egagyn complex in the subcellular distribution, processing, and secretion of glucuronidase. Ph.D. degree in biochemistry required. At least 1 year of experience in mouse biochemical genetics, in glycoprotein biochemistry, and in study of the microsomal glucuronidase complex. Salary \$20,000 per year. Send curriculum vitae and two references to: **Dr. Richard T. Swank, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263. Equal Opportunity Employer.**

RESEARCH TECHNICIAN MOLECULAR GENETICS AND TISSUE CULTURE

Cancer Research: Development of chromosome-specific fluorescent probes for flow cytometry and study of oncogenes in human tumors. Techniques: Southern and northern blots, DNA transfection assays, recombinant DNA techniques, and tissue culture. Requirements: B.S. in life sciences and 1 to 2 years of research laboratory experience using above techniques. Send résumés to: **Stanley E. Shackney, M.D., Director, Advanced Flow Cytometry Laboratory, Allegheny-Singer Research Institute, 320 East North Avenue, Pittsburgh, PA 15212.**

TERRESTRIAL VERTEBRATE ECOLOGIST

Assistant Professor (tenure-track), 12-month appointment effective 1 July 1986. Successful candidate is expected to build an active research program, generate grant funding, develop a graduate training program, and offer a course in area of expertise. Individual is also expected to participate in the further development of the station's sanctuary education programs. Send curriculum vitae, publications, statement of research interests, and names of at least three references by 15 April 1986 to: **Search Committee, Kellogg Biological Station, Michigan State University, Hickory Corners, MI 49060. Women and minority members are encouraged to apply. MSU is an Affirmative Action/Equal Opportunity Institution.**

VIROLOGIST

**Department of Microbiology and Immunology
and the Regional Primate Research Center
UNIVERSITY OF WASHINGTON**

The University of Washington seeks candidates for a joint appointment as a faculty member in the Department of Microbiology and Immunology and as a core staff scientist of the Regional Primate Research Center. Level of appointment is to depend on qualifications. Appointee will participate in the research and teaching activities of the department. Research activities to include, but not be limited to, opportunities provided by a very large, long established colony of nonhuman primates. A research program that takes a molecular approach to the study of viral pathogenesis, which could include viral immunology, would be particularly welcome. Previous primate experience not required. Primary selection criteria will be history of scientific excellence and promise of continued research and teaching performance of the highest standard. Send letter describing research interests, curriculum vitae, and names of three professional references by 28 March 1986 to:

**Edward A. Clark, Ph.D.
Chairman, Search Committee
Regional Primate Research Center, SJ-50
University of Washington
Seattle, WA 98195
Telephone: 206-543-8706
Affirmative Action/Equal Opportunity Employer**

The Winterthur Museum and Gardens seeks to fill the position of **WOOD RESEARCHER/WOOD IDENTIFICATION SPECIALIST**. Candidates at the master's degree level or above, with a strong background in wood anatomy and research will be considered. The successful candidate will have the responsibility for routine identification of woods used in fabricating wooden objects of antiquity and fibers used in historic textiles and paper products. Interested candidates should send their résumé, including university transcripts, and three letters of recommendation to: **Dr. George J. Reilly, Head of Scientific Research, Winterthur Museum and Gardens, Winterthur, DE 19735.**

BIOCHEMIST Dallas, Texas

The Diagnostics Division of Abbott Laboratories is devoted to the design, development and manufacture of automated medical electronic instruments. We are a cash profit sharing and stock purchase company with outstanding benefits.

The ideal candidate will have a Ph.D. and 0 to 5 years experience in Physical or Life Sciences; M.S. degree plus experience is acceptable. Skills in quantitative analysis, kinetics, and instrumentation desirable. Some knowledge of computer systems helpful. This is primarily a bench-level position, involving Clinical Chemistry Assay Development.

Qualified candidates who want to take pride in their careers are invited to send resume or letter of interest to: **PERSONNEL DEPARTMENT. PLEASE - No phone calls.**



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at

Hybritech

Hybritech, located in the biotechnology center of San Diego, is a leader in the application of monoclonal antibody technology to human health care. Continued growth has created a need for **Sr. Research Associates/Scientists/Sr. Scientists/Research Managers** in the following R&D areas:

Immunologists

Successful candidates will have experience in one of the following: **Cellular Immunology, Cell Biology or Hybridoma Technology.** Responsibilities include generation of monoclonal antibodies, in vitro and in vivo lymphocyte activation, and additional research in cell fusion technology. MS/Ph.D. in a related science or equivalent experience is required, previous supervisory experience is desirable.

Biochemists/ Microbiologists

Ideal candidates will have experience in the development of immunoassays for R&D. Responsibilities will encompass antigen/antibody characterization and evaluation, immunoassay optimization and clinical evaluations. Specialists in **infectious disease, tumor markers or protein biochemistry** desired. MS/Ph.D. in a related science or equivalent experience is required, previous supervisory experience is desirable.

Biochemists/ Assay Development

Successful candidates will have experience in **assay development with solid background in tumor immunology.** Research is focused on developing human monoclonals to tumor associated antigens. Creativity in tumor assay development and the ability to provide leadership desired. Ph.D. in a related science or equivalent experience is required.

Tumor Biologists/ Cancer Immunologists

Ideal candidates will have experience with experimental animal studies used in the evaluation of monoclonal antibodies for **diagnostic and therapeutic treatment of human cancer.** Responsibilities include design, evaluation and analysis of experiments and data documentation. MS/Ph.D. in the biological sciences or equivalent experience is required, previous supervisory experience is highly desired.

Hybritech offers a stimulating work environment, competitive salaries and excellent company paid benefits. Please send your resume and salary history to: **Human Resources Department, Hybritech Incorporated, P.O. Box 269006, San Diego, CA 92126.**



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POSITIONS OPEN

KENYON COLLEGE is seeking a Visiting Assistant Professor for a 2-year appointment, beginning in the fall of 1986, with the likelihood of an extension. Ph.D. expected. Candidates should be capable of teaching a 1-year introductory course. Area of specialization open, but preference given to candidates who can teach two of the following courses: perception, comparative, physiological psychology (including human neuropsychology), or research methods and analysis. Evidence of teaching strength/ability desired. Applicants should send curriculum vitae and three letters of reference to: **Allan Fenigstein, Department of Psychology, Kenyon College, Gambier, Ohio 43022**. Applications must be received by 15 April 1986. *Kenyon College is an Equal Opportunity Employer.*

PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 15, 424 Beacon Street, Boston, MA 02115**.

ASSISTANTSHIPS

TEACHING ASSISTANTSHIPS IN PHARMACOGNOSY/MICROBIOLOGY available for September 1986. Stipend is \$7,200, with remission of tuition and health benefits. M.S./Ph.D. programs in the areas of isolation and structure elucidation of biologically active substances and effects of dietary constituents on carcinogenesis/mutagenesis are available. Contact: **Alvin B. Segelman, Department of Pharmacognosy, Rutgers University, College of Pharmacy, P.O. Box 789, Piscataway, NJ 08854**. *An Equal Opportunity Employer.*

COURSES

SHORT COURSE IN MEDICAL AND EXPERIMENTAL MAMMALIAN GENETICS 7-18 July 1986

Conducted by The Jackson Laboratory and Johns Hopkins University with support by the Lucille P. Markey Charitable Trust, March of Dimes Birth Defects Foundation, and National Institutes of Health. Lectures covering the entire field are supplemented by methodological workshops in cytogenetics, biochemical screening, linkage analysis, and molecular genetics, as well as by demonstrations of mouse mutants and problems in clinical genetics. Held at The Jackson Laboratory. Inquiries and applications should be made to: **Victor A. McKusick, M.D., 292 Carnegie Building, Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205**; or to **Thomas H. Roderick, Ph.D., c/o Training and Education Office, The Jackson Laboratory, Bar Harbor, ME 04609**.

Course on
MOLECULAR AND CELLULAR IMMUNOLOGY
11 to 31 August 1986
at
Marine Biological Laboratory
Woods Hole, MA 02543

Directors: Carol L. Reinisch, Tufts University School of Veterinary Medicine; Darcy B. Wilson, Medical Biology Institute, LaJolla, CA.

Faculty: Nancy Hogg, Imperial Cancer Research Fund, London; Paul W. Kincade, Cancer Research Program, Oklahoma Medical Research Foundation; Robert S. Schwartz, Cancer Research Center, Tufts New England Medical Center; Geoffrey H. Sunshine, Tufts University School of Veterinary Medicine.

Enrollment: limited to 25 students

Tuition: \$1200

Deadline: 1 April 1986

For further information, contact: **The Office of Grants and Educational Services**; telephone: 617-548-3705, extension 216.

COURSES

Molecular and Developmental Biology of Plants Cold Spring Harbor Laboratory Summer Course 29 June to 19 July 1986

This course covers current topics and techniques in plant biology, with emphasis on molecular and developmental biology and genetics. It is designed for scientists with working knowledge of molecular techniques who wish to expand, or begin research with plant systems. Eighteen guest speakers will provide an overview of their field, an in-depth presentation of their work, and will be available for discussions. The laboratory will include several guest instructors and will cover established and novel techniques in plant biology, including plant structure and development, nucleic acid manipulations, gene transfer techniques, tissue and cell culture techniques, photosynthesis, and genetics and cytogenetics of maize. Instructors: **Ian Sussex, Yale; Joachim Messing, Waksman Institute; Robert Horsch, Monsanto Company**. Deadline for applications is 15 March. For information, telephone: 516-367-8343.

CONFERENCE

The New York Academy of Sciences INTERNATIONAL CONFERENCE ON THE NEURAL MECHANISMS AND BIOLOGICAL SIGNIFICANCE OF GROOMING BEHAVIOR 15 to 17 October 1986

The New York Hilton at Rockefeller Plaza

It is the purpose of this conference to provide a multidisciplinary forum in which to discuss the neural mechanisms and biological significance of grooming behavior. Topics to be addressed include: grooming in the developing and aging animal; comparison of grooming behaviors induced by fragments of pro-opiomelanocortin and other peptides; environmental and pharmacological modulation of grooming; the neurochemistry, anatomical substrates, and electrophysiological correlates of grooming; ethological and comparative aspects of grooming behaviors.

There will be contributed poster sessions. The deadline for submission of abstracts is 15 June 1986. A 200-word summary of work to be presented should be sent to: **Dr. Deborah Colbern, University of Illinois at Chicago, College of Medicine, Physiology and Biophysics, P.O. Box 6998, Chicago, IL 60680** AND **Professor Willem Gispen, University of Utrecht, Institute for Molecular Biology, Padualaan 8, Postbus 80.063, 3508 TB Utrecht, The Netherlands**.

Inquiries should be addressed to: **Conference Department, The New York Academy of Sciences, 2 East 63rd Street, New York, New York 10021**.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP position available to study the motile behavior of pulmonary macrophages. Approaches include immunocytochemistry and use of computer-interfaced image analysis systems. Applicants should have background in cell biology or immunology. Send curriculum vitae and names of three references to: **Ronald P. Daniele, M.D., Director, Pulmonary Immunology Training Program, 807 East Gates, Hospital of University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104**. *Equal Opportunity Employer.*

SHORT-TERM GENETIC SEQUENCE COMPUTER ANALYSIS TRAINING FELLOWSHIPS.

Available at the Dana-Farber Cancer Institute and Harvard School of Public Health. Housing and travel support provided for from 1 to 8 weeks. Positions open to graduate students, postdoctoral fellows, and senior researchers in molecular biology or computer science. Positions provide available software introductory training and/or collaborative research genetic sequence problem support. For further information, contact: **Susan Tolman, Resource Coordinator, Molecular Biology Computer Research Resource, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115**. *An Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN MOLECULAR BIOLOGY/IMMUNOLOGY OF PARASITES: University of Pennsylvania. Program seeks to apply molecular biological and immunologic techniques to the study of immunopathology and resistance induced by exposure to schistosoma, trichinella, and malaria. Opportunities exist for both basic laboratory and applied clinical studies. Please send curriculum vitae, descriptive letter of interests, and names of three references to: **S. Michael Phillips, M.D., Geographic Medicine, Immunology, 519 Johnson Pavilion, University of Pennsylvania, School of Medicine, Philadelphia, PA 19104**.

GRADUATE FELLOWSHIPS IN MOLECULAR MICROBIOLOGY. The Department of Medical Microbiology at the University of Vermont invites applications from persons interested in a career in molecular microbiology. Areas of inquiry include: cytoplasmic factors affecting maintenance and control of the carcinogenic state; use of recombinant DNA techniques to study genes controlling development in higher fungi and genes involved in determining bacterial virulence; application of biochemical, immunological, and molecular genetic techniques to study (i) mechanisms of bacterial adhesion to host tissue and biological implants; (ii) response of eukaryotic cells to toxins, hormones and viruses, and (iii) regulation of protein synthesis in eukaryotes. Full tuition remission and tax-free stipend approximately \$8000 per year. Write: **Dr. Thomas J. Mochring, Department of Medical Microbiology, The University of Vermont, Burlington, VT 05405**.

CALIFORNIA INSTITUTE OF TECHNOLOGY THE CHAIM WEIZMANN POSTDOCTORATE FELLOWSHIP FOR SCIENTIFIC RESEARCH IN GEOLOGICAL AND PLANETARY SCIENCES

Fellowships will be awarded for postdoctoral studies in geological and planetary sciences at the California Institute of Technology. These fellowships carry annual stipends of \$28,000 from fall 1986, and in addition offer a research-expense fund of \$1,000 per year. The duration of fellowships will normally be for 2 years. Applicants must be U.S. citizens.

This fellowship program has been established to offer scientists, typically within 2 years of receipt of the Ph.D., the best possible opportunity to develop their talents. Research will be encouraged in areas in which Caltech's faculty is currently active:

Atmospheric and Planetary Science
Geochemistry and Petrology
Geology and Geobiology
Geophysics and Seismology

Application forms may be obtained from: **Professor Peter J. Wyllie, Division of Geological and Planetary Sciences, 170-25, California Institute of Technology, Pasadena, CA 91125**. Completed applications with references should arrive at Caltech before 1 April 1986.

Fellowship candidates will automatically be considered for other available postdoctoral positions at Caltech in their fields of interest.

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

Applications are invited for **POSTDOCTORAL RESEARCH FELLOWSHIPS** from individuals holding the Ph.D. and/or M.D. degree with a background and interest in biochemistry or cell biology. Two areas of research investigation are available: The molecular pathobiology of the acute inflammatory phospholipid mediator, platelet-activating factor (PAF) under the direction of **R. N. Pinckard, Ph.D.**; or with **C. J. Schwartz, M.D.** and colleagues on the biochemical, cellular molecular biological mechanisms in atherogenesis. Both programs are located within the Department of Pathology, The University of Texas Health Science Center, San Antonio, (UTHSCSA), *An Equal Opportunity Employer*. Candidates must be either U.S. citizens or permanent residents of the United States. Applications including a résumé detailing research background, interests, experience, career goals, and the names of three references should be directed to either **Dr. Schwartz** or **Dr. Pinckard** at the following address: **Department of Pathology, UTHSCSA, 7703 Floyd Curl Dr., San Antonio, TX 78284**.



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