

area 1, which contains one of the multiple representations of the hand in the postcentral gyrus of some primates, may convey an evolutionary advantage for texture discrimination capacities to monkeys that have this extra representation. Darian-Smith and colleagues show that only neurons in somatosensory cortex fire differently when a monkey actively palpates textured surfaces of different spatial gratings. They also show that the discharge patterns are confounded by the speed of finger movements over the surfaces. They suggest that some unknown mechanisms or cortical regions provide for subtraction of the patterns of finger movements to allow identification of the responses that are unique to the surfaces. Alternatively, as Iwamura and colleagues suggest, neurons responsive to particular features of an object, such as edges or degrees of hardness, may abstract the basis for more complex discriminations. Nelson shows, however, that the interactions between sensory inputs and movements are complex, since the patterns of neuronal response to a vibrotactile stimulus in different parts of somatosensory cortex vary considerably in relation to the phases and context of active movements of the stimulated hand. What effect might the pre-movement inhibitions of sensory induced discharges studied by Nelson have on the responses noted by Darian-Smith *et al.*? Only minimally considered though they are central to the understanding of texture discrimination capacities are the intensive (Lederman), modal, and temporal features that specify textured surfaces.

Motor control of the hand is generally considered similar to that for any movements of the body but may differ considerably for fine movements, such as precision grips. In a review of earlier work by Phillips and others, Evarts emphasizes that, like motor control of the speech apparatus, fine hand movements are characterized by a high degree of fractionation and individuation of the muscles of the hand. Proprioceptive inputs from these muscles contribute to a transcortical reflex through motor cortex that is particularly active in modulating motor cortex discharges that are used in accurate positioning and precise fine movements. The purpose of this feedback is to stabilize limb position, according to Evarts. Papers by Muir and Cheney *et al.* show by means of the methods of spike-triggered averaging that these motor cortex neurons are active in phase with and probably encode simple parameters of active movements of the intrinsic hand muscles during precision grips;

the outflow from a single motor cortex neuron fractionates to multiple muscles as postulated previously. During fine movements there is evidence that these motor cortex discharges are linked to particular muscles.

Several papers consider the question of which cortical areas are important for directing movements. Georgopoulos *et al.* show that neurons in areas 4 and 5 are concerned with the direction of a movement and not the trajectory or targeting of the movement. Trajectory and targeting may be served by neurons in the supplementary motor cortex, where cells show a "modality-specific preparatory process for sensory-triggered motor responses" (Tanji), or by cells in area 7, where responses are stimulus-related but contingent upon the performance of movements (Lamarre *et al.*). These results still do not indicate how the particular trajectory of a movement is coded by the discharges. Is it by synchronously controlling groups of muscles, by setting joint angles, or by learning some topographical relationship of the hand in space? Answering this question and locating where in the cortex this process occurs might be pivotal to understanding fine movement controls and the subtractive processes that may be needed to extract sensory signals received during active touch.

HAROLD BURTON

*Department of Anatomy and  
Neurobiology, Washington  
University School of Medicine,  
St. Louis, Missouri 63110*

### Some Other Books of Interest

**Embryology of Angiosperms.** B. M. JOHRI, Ed. Springer-Verlag, New York, 1984. xxvi, 830 pp., illus. \$115.

This work, characterized by its editor as an advanced treatise, consists of 16 chapters by a total of 19 authors. The opening chapter, by Johri and Ambegaokar, traces the study of angiosperm embryology from 1694 to the current era. There follow chapters on the microsporangium (Bhandari), the ovule (Bouman), the female gametophyte (Willemse and van Went), the pollen grain (Knox), fertilization (van Went and Willemse), the endosperm (Vijayaraghavan and Prabhakar), the embryo (Natesh and Rau), polyembryony (Lakshmanan and Ambegaokar), and gametophytic apomixis (Nogler). The role of polyploidy is dealt with by D'Amato and the structure and the germination of the seed are dealt

with by Boesewinkel and Bouman and by Jacobsen. The remaining chapters discuss embryology as related to taxonomy (Herr), homologies and phylogeny (Favre-Duchartre), and experimental embryology (Johri and Rao). The book has both taxonomic and subject indexes.—KL

**The Experimental Biology of Bryophytes.** A. F. DYER and J. G. DUCKETT, Eds. Academic Press, Orlando, Fla., 1984. xviii, 281 pp., illus. \$68.50. *Experimental Botany*, vol. 19.

Noting that none of the several books about bryophytes published in the last few years has been "directed primarily towards the broadly-based experimental approach," the editors of this volume have set out to provide such a treatment. A brief introduction by Richards is followed by accounts of structure and ecological adaptation (Proctor), breeding systems (Wyatt and Anderson), cytogenetics (Newton), culture (Lal), cell and plastid cycles (Paolillo), and development (Knoop). The remaining chapters deal with hormonal regulation of gametophytic development (Cove and Ashton), photomorphogenesis (Hartmann and Jenkins), uptake of mineral elements including pollutants (Brown), and photosynthesis and its products (Valanne). The editors note the lack of a chapter on ultrastructure. A subject index concludes the book.—KL

### Books Received

**Alcoholism in the Professions.** LeClair Bissell and Paul W. Haberman. Oxford University Press, New York, 1984. xvi, 214 pp. \$24.95.

**All the World's a Fair.** Visions of Empire at American International Expositions, 1876-1916. Robert W. Rydell. University of Chicago Press, Chicago, 1985. x, 328 pp., illus. \$27.50.

**Alternating Copolymers.** J. M. G. Cowie, Ed. Plenum, New York, 1985. xii, 281 pp., illus. \$47.50. *Specialty Polymers*.

**Anaerobic Treatment of Forest Industry Wastewaters.** P. Rantala and A. Luonsi, Eds. Pergamon, New York, 1985. x, 326 pp., illus., + appendix. Paper, \$44. *Water Science and Technology*, vol. 17, No. 1. From a symposium, Tampere, Finland, June 1984.

**Analysis in Classes of Discontinuous Functions and Equations of Mathematical Physics.** A. E. Vol'pert and S. I. Hudjaev. Nijhoff, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, Mass.). xviii, 678 pp. \$117.50. *Mechanics: Analysis*, 8.

**Lift Is Where You Find It.** Joe Stein. Zig Zag Papers, Zig Zag, Ore., 1985. xiv, 207 pp., illus. Paper, \$7.95.

**The Literature of the Life Sciences.** Reading, Writing, Research. David A. Kronick, assisted by Wendell D. Winters. ISI Press, Philadelphia, 1985. xiv, 219 pp. \$29.95. *The Library and Information Science Series*.

**Lithium.** Current Applications in Science, Medicine, and Technology. Ricardo O. Bach. Wiley-Interscience, New York, 1985. xx, 422 pp., illus. \$80.

**Living Coral Reefs of the World.** Dietrich H. H. Kuhlmann. Arco, New York, 1985. 185 pp., illus. \$24.95. Translated from the German edition.

**Low Dose Oral and Transdermal Therapy of Hypertension.** M. A. Weber, J. I. M. Drayer, and R.

(Continued on page 787)

## BOOKS RECEIVED

(Continued from page 753)

Kolloch, Eds. Steinkopff, Darmstadt, 1985 (U.S. distributor, Springer-Verlag, New York). vi, 149 pp., illus. \$24. From a symposium, Geneva, June 1984.

**Lymphokines.** A Forum for Immunoregulatory Cell Products. Edgar Pick, Ed. Vol. 10, Growth and Differentiation of B Cells. Max H. Schreider and Kendall A. Smith, Eds. Academic Press, Orlando, Fla., 1985. xvi, 227 pp., illus. \$49.

**Making Babies.** The New Science and Ethics of Conception. Peter Singer and Deane Wells. Scribner, New York, 1985. x, 245 pp. \$14.95.

**Mammalian Physiology.** J. Homer Ferguson, Merrill, Columbus, 1985. x, 517 pp., illus. Cloth.

**Sedimentology.** Recent Developments and Applied Aspects. P. J. Benchley and B. P. J. Williams, Eds. Published for the Geological Society by Blackwell Scientific, Palo Alto, Calif., 1985. vi, 342 pp., illus. \$60; paper, \$31.

**Seismic Activity in Western Europe.** With Particular Consideration to the Liège Earthquake of November 8, 1983. Paul Melchior, Ed. Reidel, Boston, 1984 (distributor, Kluwer, Hingham, Mass.). xii, 448 pp., illus. \$59. NATO ASI Series C, vol. 144. From a workshop, Brussels, March 1984.

**Semiotic Praxis.** Studies in Pertinence and in the Means of Expression and Communication. Georges Mounin. Plenum, New York, 1985. xxvi, 236 pp. \$32.50. Topics in Contemporary Semiotics.

**The Shape and Form of Puget Sound.** Robert Burns. Washington Sea Grant Program, Seattle, 1985 (distributor, University of Washington Press, Seattle). xiv, 101 pp., illus. Paper, \$8.95. Puget Sound Books.

**Smoking and the Lung.** G. Cumming and G. Bon-signore, Eds. Plenum, New York, 1984. x, 504 pp., illus. \$82.50. Ettore Majorana International Science Series (Life Sciences), vol. 17. From a course, Erice, Italy, Oct. 1983.

**Social Support and Health.** Sheldon Cohen and S. Leonard Syme, Eds. Academic Press, Orlando, Fla., 1985. xviii, 390 pp. \$40.

**Software Lifecycle Management.** The Incremental Method. William C. Cave and Gilbert W. Maymon. Macmillan, New York, and Collier Macmillan, London, 1984. xiv, 172 pp., illus. Cloth. The Macmillan Database/Data Communications Series.

**Solar Maximum Analysis.** P. A. Simon, Ed. Published for the Committee on Space Research by Pergamon, New York, 1985. viii, 404 pp., illus. \$99.50. Advances in Space Research, vol. 4, No. 7. From a symposium, Graz, Austria, June 1984.

**Solar-Space Observations and Stellar Prospects.** J. W. Harvey, H. S. Hudson, and R. W. Noyes, Eds. Published for the Committee on Space Research by Pergamon, New York, 1985. vi, 175 pp., illus. \$49.50. Advances in Space Research, vol. 4, No. 8. From a meeting, Graz, Austria, June 1984.

**Toxicology of Inhaled Materials.** General Principles of Inhalation Toxicology. H. P. Witschi and J. D. Brain, Eds. Springer-Verlag, New York, 1985. xviii, 553 pp., illus. \$172. Handbook of Experimental Pharmacology, vol. 75.

**Toxicology of the Blood and Bone Marrow.** Richard D. Irons, Ed. Raven, New York, 1985. x, 182 pp., illus. \$39.50. Target Organ Toxicology Series.

**Transformation Groups Applied to Mathematical Physics.** Nail H. Ibragimov. Reidel, Boston, 1984 (distributor, Kluwer, Hingham, Mass.). xvi, 394 pp. \$69. Mathematics and Its Applications (Soviet Series). Translated from the Russian edition.

**Trichinellosis.** Charles W. Kim *et al.*, Eds. State University of New York Press, Albany, 1985. xx, 343 pp., illus. \$49.50. From a conference, Val Morin, Quebec, Canada, July 1984.

**Under Newton's Shadow.** Astronomical Practices in the Seventeenth Century. Lesley Murdin. Adam Hilger, Bristol, 1985 (U.S. distributor, International Publishers Service, Accord, Mass.). viii, 152 pp., illus. \$26.

**Understanding Learning Disabilities.** International and Multidisciplinary Views. Drake D. Duane and Che Kan Leong, Eds. Plenum, New York, 1985. xiv, 272 pp., illus. \$42.50. From a seminar, Rochester, Minn., July 1983.

**Uterine Contractility.** S. Bottari *et al.*, Eds. Masson, Paris, 1984. viii, 474 pp., illus. 360 F. From a symposium, Brussels, Sept. 1982.

**The Wars of Gods and Men.** Zecharia Sitchin. Avon, New York, 1985. vi, 378 pp., illus. Paper, \$4.95.

**Water Supply and Pollution Control.** Warren Viessman, Jr., and Mark J. Hammer, 4th ed. Harper and Row, New York, 1985. xviii, 797 pp., illus. Cloth.

**Wildfowl.** Photographs by Eric Hosking. Text by Janet Kear. Facts On File, New York, 1985. 153 pp. \$24.95.



## National Research Fellowships

## QUEEN ELIZABETH II AWARDS

The Australian Government has established the National Research Fellowships—Queen Elizabeth II Awards to replace the previous Queen Elizabeth II Fellowships and Queen's Fellowships Schemes. Under this Scheme, 15 awards will be made annually. Fellowships may be taken up in industry, universities, colleges of advanced education or government research organisations in Australia and are normally for two years. Tenure of a Fellowship is expected to commence within nine months of the announcement of the award. The awards are for high quality research work in one of the three categories described below:

### 1. FUNDAMENTAL RESEARCH

### 2. INDUSTRY BASED RESEARCH

### 3. RESEARCH IN PRIORITY AREAS OF NATIONAL INTEREST

Priority areas of National Interest may include:

- Research and development into products and processes, marketing, trade and social and legal issues concerning high technology areas such as:
  - energy technology
  - information technology and communications
  - materials technology
  - biomedical technology
  - biotechnology
  - raw materials processing
- Manufacturing technology
- Productivity
- Income, wealth and social inequality
- Social and economic issues affecting training and employment with particular regard to those affecting women and youth
- Occupational safety and health
- Social and economic implications of ageing
- Aboriginal Affairs
- Provision of services e.g. welfare, transport, health care
- Marine Sciences and Technologies

### QUALIFICATIONS

Fellowships will be awarded to persons holding a Ph.D or equivalent qualifications, or equivalent research or professional experience in one of the disciplines available under the National Research Fellowships Scheme. The decisions regarding equivalent qualifications will be made on a case by case basis. Recommendations for the award of Fellowships will be made to the Minister for Science by an Advisory Committee. Awards will, in general, be restricted to applicants who are not more than 30 years of age when applications close.

### ELIGIBILITY

Fellowships will be awarded on merit to suitably qualified persons.

### SALARY

\$27,414 (Australian) per annum — increased to \$29,763 per annum at age 28 years.

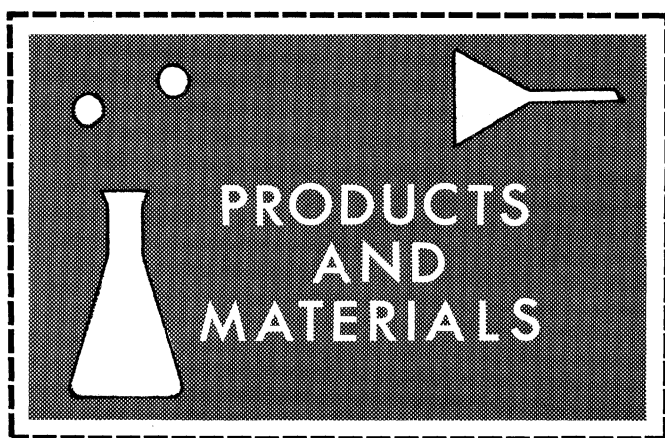
### TRAVEL EXPENSES

Necessary travel expenses are payable.

### APPLICATIONS

Persons interested in applying for the above fellowships should obtain application forms and a statement of the conditions of award from: Executive Officer, National Research Fellowships Scheme, Department of Science, P.O. Box 65, Belconnen, A.C.T. 2616, Australia.

The next round of awards will be announced in December 1985. Applications received after the closing date of 10 September, 1985 will not be considered. People who applied for the earlier round which closed on 17 May 1985 will also be considered for this round and need not reapply.



### Supercomputer

The FX/8 applies parallel processing to scientific and engineering software for computationally intense problems. Up to eight computational elements are applied to the execution of a single program in Alliant Concurrency. Multiprocessing applies up to 12 interactive processors to the execution of independent user interactive jobs, the operating system, and all input and output. When the FX/8 is configured with eight computational elements it delivers peak performance of 94 million floating-point operations per second and 35.6 million instructions per second. Applications include finite element modeling, seismic analysis, electronic simulation, signal processing, and others in physics, chemistry, and mathematics. Alliant Computer Systems. Circle 604.

### Laboratory Software

The Gantt Lab Manager is a software package that runs on IBM PC and other compatible instruments. It performs the following functions: Sample management and work-load control; quality assurance; project management including methods, process, and product development; and management analysis and administration. It is easy to learn to use and to teach to others. It functions in laboratory operational areas where priorities may shift even as routine analyses continue. It improves productivity through time analysis and more. Gantt Systems. Circle 590.

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 710A and 790E) and placing it in a mailbox. Postage is free.

—RICHARD G. SOMMER

### Ophthalmic Laser

The model 920 Argon/Dye ophthalmic laser is tunable through the spectrum for medical versatility. Laser wavelength may be adjusted to accommodate retinal pigmentation, presence of blood, and foveal proximity. The device is microprocessor-controlled with push-button selection of wavelength and rapid changeover from argon to dye operation. The firm has marketing approval for the model 920 laser from the U.S. Food and Drug Administration. Coherent, Medical Group. Circle 591.

### Vessel Wall Model

Tissue culture dishes coated with extracellular matrix (ECM) provide a model of the subendothelial vessel wall for cardiovascular and thrombosis research. The naturally produced ECM closely resembles the basal lamina in its arrangement and structure. These dishes may be used to study platelet adherence, aggregation, and thrombus formation. Hemorrhagic disorders, drug sensitivity, and megakaryocyte formation and activation may be examined. Blood-borne tumor cell arrest and invasion may be studied in vitro. The coating is available on a range of culture dishes, flasks, multiwell plates, and cover slips. International BioTechnologies. Circle 599.

### Bone Embedding Kit

Osteo-Bed is designed for embedment of large mineralized (undecalcified) bone specimens for investigators of metabolic bone diseases. It provides a clear, hard acrylic matrix for cutting sections with a heavy-duty microtome. Osteo-Bed solvent is provided to remove plastic from sections for staining. Smaller bone samples also demonstrate the qualities of Osteo-Bed. Polysciences. Circle 587.

### Chemistry Analyzer

The GEM · PROFILER can perform up to 18 chemistries simultaneously. The operator may configure and analyze several different organ-specific profiles at a time. Less than 8 minutes is required to complete all tests in a given run. There are three modes of operation: Batch, Profile, and Sprint. Sprint is a mode in which the computer automatically optimizes the work load for rapid turnaround. Additional samples may be added to a work list even after the start of operation. Only microliter volumes of sample and reagents are consumed in each test. A typical volume of sample is 10  $\mu$ l. There are 25 reagent containers. Nineteen chemistries are programmed and there are 31 open channels for the user. Electro-Nucleonics. Circle 603.

### Laboratory Animal Protection

The Double Flow Animal Station is a laminar flow unit designed to protect laboratory animals from microbiologic and particulate contamination. The device provides two columns of ultraclean, HEPA-filtered air. Thus, two racks of cages may be handled with one unit that measures 76 by 93 by 19 inches (enough for 250 mouse-sized cages). Although it is specifically designed to protect nude mice and other inbred strains of mice, it is equally useful for other laboratory species. It features a flip-top design to facilitate conversion from positive to negative pressure operation. Racks are interchangeable to minimize downtime for cleaning the cage. Germfree Laboratories. Circle 601.

### Literature

*Biochemicals* lists more than 1500 products for molecular biology, immunology, cell culture, and general biochemistry. Boehringer Mannheim Biochemicals. Circle 598.

*Chromatography* includes products for gas and liquid chromatography in a short-form catalog. Tracor Instruments. Circle 593.

*Amines and Derivatives* is a list of 150 chemicals available to scientific researchers. Applications include pharmaceutical intermediates, chelating agents, catalysts, antioxidants, and others. Pfaltz & Bauer. Circle 594.

*Reverse Osmosis and Membrane Filtration Processes* are covered with their applications in an extensive brochure. Osmonics. Circle 605.

# 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 November 1979, 10 April 1981.

Price is \$5 each (prepaid).

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

## ELECTRONIC CONTROLLED INCUBATOR



- Electronic controller and recorder capabilities
- 1.5 and 5 cubic ft. chrome plated brass chamber
- Easy to read digital temperature display
- Backup control system to prevent high temperature condition
- Digitally set operating temperature
- Reversible door with magnetic latch
- Attractively priced



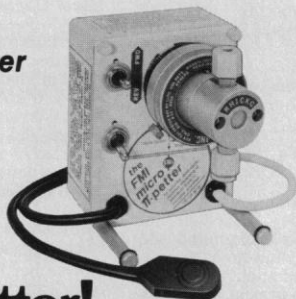
**Thermolyne**  
SUBSIDIARY OF  
**SYBRON**

2555 Kerper Blvd. (319) 556-2241  
Dubuque, IA 52001 (800) 553-0039

Circle No. 149 on Readers' Service Card

**Pipetting?  
Single-Shot Microliter  
Dispensing?**

**Try the  
all-new  
FMI  
micro  $\pi$ -petter!**



It provides a simple, low-cost means of dispensing very small amounts of fluids for applications such as pipetting, reagent preparation, syringing, precision sampling, repetitive and volumetric dispensing. The variable displacement, valveless RR piston design makes it possible to dispense volumes of 2 to 100  $\mu$ l per shot with incremental adjustment of less than 0.5  $\mu$ l. PIP units are also reversible for aspirating fluids or back flushing the system.

A simple, sealed pushbutton hand/foot pendant switch makes a momentary contact for one dispense per push when the mode switch is in the down (Singles) position, or it may be held down for purging or reagent rinsing when the mode switch is in the up (Repeat) position. Using a combination of forward and reverse modes makes dilutions especially easy. Wetted surfaces of ceramic and fluorocarbon provide for maximum chemical compatibility. A three-speed 110 VAC 60 Hz synchronous motor provides three shot velocities to meet your fluid and vessel requirements.

Two standard models are available at a price of \$450 each F.O.B. FMI: Model PIP0CKC—0 to 50  $\mu$ l; Model PIP1CKC—0 to 100  $\mu$ l.



**FLUID METERING, INC.**

29 ORCHARD STREET, OYSTER BAY, N.Y. 11771 • (516) 922-6050

SEE US AT THE  
ACS SHOW  
—BOOTH 1218!

Circle No. 206 on Readers' Service Card

## BURN YOUR REFERENCE CARDS!

# REF-11<sup>TM</sup>

Computerizes your REFERENCES  
and prepares your BIBLIOGRAPHIES

- ☐ Maintains a data base of references
- ☐ Searches for any combination of authors, years of publication, reference title (or any words in the title), and topics covered by the reference
- ☐ Formats bibliographies exactly as you want them
- ☐ Alphabetizes references
- ☐ Menu driven dialogue
- ☐ Abbreviates journal titles
- ☐ Compact storage format
- ☐ Runs on any video terminal and printer
- ☐ 20 lines of comments for each reference

IBM PC/XT/AT, MS-DOS, CP/M 80 ... **\$195<sup>00</sup>**

RT-11, TSX-Plus, RSX-11, P/OS . . . . . **\$250<sup>00</sup>**

VAX/VMS (native mode) . . . . . **\$350<sup>00</sup>**



ANY  
MANUAL **\$15<sup>00</sup>**

ANY  
MANUAL  
& DEMO **\$20<sup>00</sup>**

322 Prospect Ave., Hartford, CT 06106  
(203) 247-8500

Connecticut residents add 7 1/2 % sales tax.

Circle No. 45 on Readers' Service Card

# 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:**  
13 September issue (mailed 6 September): **23 August**  
20 September issue (mailed 13 September): **30 August**  
27 September issue (mailed 20 September): **6 Sept.**  
4 October issue (mailed 27 September): **13 Sept.**

**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):** \$11.40 per millimeter; \$285 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**  
9th Floor—1333 H Street, NW  
Washington, D.C. 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, N.Y. 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)  
**SCIENCE**  
9th Floor—1333 H Street, NW  
Washington, D.C. 20005

## POSITIONS WANTED

**Aquatic Ecologist.** Ph.D. Completing 2-year postdoctoral fellowship. Physical and chemical factors affecting phytoplankton distribution. Water and sediment chemistry. Field and laboratory experience, including computer programming, software, and statistics. Teaching experience. Available late August. Lawrence Battoe, 108 Main Drive, Venus, Florida 33852. Telephone: 813-465-2571. X

**Ph.D. Biochemist,** more than 10 years of research experience in DNA enzymology, DNA repair, rDNA techniques, cDNA cloning, enzyme/protein purification, characterization, protein, nucleic acid chemistries, and university teaching. Nine publications. Seeking suitable position in academia or industry immediately. Box 166, SCIENCE. X

**Biochemist/Microbiologist.** Ph.D. Experience in protein purification and characterization, HPLC, monoclonal antibodies and associated methodology. National Institutes of Health (NIH) Study Section member (4 years). Current research continuously supported by NIH for more than 10 years. Seeks challenging position in industry. Box 170, SCIENCE. 8/23, 30; 9/6

**Biological Laboratory Manager/Technician.** B.A. biology, experience as a college laboratory manager (purchasing, laboratory preparation, stock supplies, maintenance and development of scientific equipment, plant and animal care), Peace Corps Fisheries Africa, teacher certification (secondary school). Seeks position as laboratory manager/technician. Telephone: 617-887-2452. X

**Biomedical Engineer.** Ph.D. Several years of teaching and research experience, physiological, biomechanical, and rehabilitation engineering; numerous publications. Seeks challenging position in teaching/research, university/industry. Box 178, SCIENCE. X

## POSITIONS WANTED

**Cell Biologist/Experimental Pathologist, Ph.D.** Research interests during last 10 years have been the differentiation and early diagnosis of human cancer. Extensive experience in electron microscopy, cytochemistry, autoradiography, two-dimensional gel electrophoresis, affinity chromatography, and organ culture techniques. Numerous publications. Seeking position in industry or academic institution. Box 168, SCIENCE. 8/23, 30

**Cytogeneticist.** Ph.D. Four years of experience in diagnostic, research cancer, mammalian tissue culture, drug resistance, chromosome fragility, prometaphase banding, immunofluorescence, teaching and publications. Background in molecular biology techniques. Box 177, SCIENCE. X

**Veterinary Pathologist.** D.V.M., Ph.D. Basic research experience in environmental toxicology; 21 research papers, 10 as senior author. Four years of experience as a surgical pathologist. Seeks position in academia or industry. Box 179, SCIENCE. X

## POSITIONS OPEN

### NATIONAL CENTER FOR ELECTRON MICROSCOPY LAWRENCE BERKELEY LABORATORY

Lawrence Berkeley Laboratory seeks an **ANALYTICAL ELECTRON MICROSCOPIST** to fill a career staff scientist position in our National Center for Electron Microscopy (NCEM). Duties include development of instrumentation, software support, and experimental techniques for advanced analytical electron microscopy; operation of a JEOL JEM 200CX analytical electron microscope equipped with Kevex System 8000 energy dispersive x-ray spectrometer and Gatan model 607 electron energy loss spectrometer; conduct original research in the application of analytical electron microscopy to problems in materials science; provide collaboration and support for NCEM scientific staff and visitors in both theoretical and experimental aspects of analytical electron microscopy. Requires Ph.D. in materials science and demonstrated experience in analytical electron microscopy including CBED, EDS, and EELS. Experience must include practical ability in microscopy as well as theoretical understanding of electron-solid interactions. Familiarity with JEM 200CX instrumentation is preferred. Send résumé and two/three letters of recommendation to: **Job Number A/3456, Employment Office, Mail Stop 90-1012, Lawrence Berkeley Laboratory, Berkeley, Calif. 94720.** An Equal Opportunity Employer, M/F/H.

### ANIMAL PHYSIOLOGIST UNIVERSITY OF CALIFORNIA

The Department of Animal Physiology invites applications for a faculty position at the rank of assistant professor, the level depending on background and experience. This is an 11-month, full-time, tenure-track appointment. The successful applicant will be expected to contribute to the department's advising and teaching program in systemic physiology for undergraduate and graduate students. Minimum qualifications include a Ph.D. and a demonstrated ability to conduct high-quality and original research in animal physiology. Applicants should submit curriculum vitae, statement of research and teaching interests, reprints, transcripts (if Ph.D. conferred within last 5 years), and names and addresses of at least three references to: **Chair, Animal Physiologist Search Committee, Department of Animal Physiology, University of California, Davis, Calif. 95616.** Closing date for receipt of applications is 30 September 1985. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

**ANIMAL PHYSIOLOGY.** Tenure-track assistant professorship with expectation of development of active research program in field of expertise; excitable cell (sensory, neuromuscular) or gastrointestinal physiology preferred. The successful applicant will have a strong commitment to teaching at both undergraduate and graduate level. Ph.D. in a biological science required; postdoctoral experience preferred. Please submit letter of application (including description of research and teaching interests), curriculum vitae, and three letters of reference by 30 September 1985 to: **Dr. Peter L. Starkweather, Chair, Department of Biological Sciences, University of Nevada, Las Vegas, Las Vegas, Nev. 89154.** *The University of Nevada is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ANATOMIST

A recently established medical school invites applications to fill a tenure-track position in anatomy. Applicants must possess a Ph.D. and/or M.D. with postdoctoral training. The successful candidate will participate as a tutor in a problem-based curriculum and be expected to develop an active research program. Applications will be accepted until 15 September 1985. Applicants are requested to submit curriculum vitae, a brief statement of professional objectives and research interests, and the names and addresses of three referees to: **Dr. Robert Moon, Chairman, Division Basic Medical Sciences, Mercer University School of Medicine, Macon, Ga. 31207.** An Equal Opportunity/Affirmative Action Employer.

### AQUATIC ECOLOGISTS

Martin Marietta Environmental Systems will be expanding its ecology and applied biology groups during the rest of 1985 and into 1986. We anticipate openings at the Ph.D. and M.S. levels to work on programs in applied ecology and resource management. Individuals with backgrounds in freshwater systems (riverine) ecology, fisheries and statistics are invited to contact us. A combination of quantitative skills and aquatic sciences are also desired. Good writing ability is desirable for any position.

We offer a challenging environment, excellent compensation and benefits package (including paid health, dental and vision programs; and performance sharing). Please send résumé to: **Monica C. Ballard, Martin Marietta Environmental Systems, 9200 Rumsey Road, Columbia, Md. 21045.** *Equal Opportunity Employer, M/F.*

**ASSISTANT PROFESSOR—Tenure-track position.** The College of Marine Studies, University of Delaware, announces a 12-month, tenure-track marine biology/biochemistry faculty position in biochemistry and physiology of marine organisms (plant or animal). Responsibilities will include development of a vigorous research program, teaching and student advisement in the area of expertise. Applicants should send curriculum vitae, list of publications, summary of research goals, and names of three references to: **Dr. Kent S. Price, Chairman, Search Committee, College of Marine Studies, University of Delaware, 700 Pilottown Road, Lewes, Del. 19958.** Applications will be accepted to 31 October 1985. *The University of Delaware is an Affirmative Action/Equal Opportunity Employer.*

Tenure-track **ASSISTANT PROFESSOR** position available as early as 1 January 1986 in the Department of Pharmacology, School of Medicine, University of Wisconsin—Madison. Applications are invited from individuals who possess the Ph.D. and/or M.D. degree and who will develop a vigorous research program in molecular and/or cellular pharmacology. Submit curriculum vitae and names of three references to: **Search Committee, Department of Pharmacology, University of Wisconsin Medical School, 1300 University Avenue, Madison, Wis. 53706.**

The first round deadline for this advertisement is 15 October 1985. However, the position will remain open until filled. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR.** The Department of Anatomy and Cellular Biology at Harvard Medical School invites applications for a junior position that will be available in 1986. Applicants should have active research programs in the general areas of cell, molecular, and/or developmental biology and be prepared to teach either histology or gross anatomy. Send curriculum vitae, bibliography, and three or four references by 1 November 1985 to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy and Cellular Biology, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.** *Harvard University is an Equal Opportunity Employer.*

**ASSOCIATE PROFESSOR,** 1 September 1985 or later. Salary negotiable. Tenure-track in biological psychology Ph.D. program. Duties: teach graduate courses; graduate research supervision; development of a research program on the biopsychological aspects of mental health and disease, utilizing electrophysiological, psychophysiological or neuropsychological techniques. Requirements include Ph.D. in psychology, strong background in neuroscience or psychopharmacology and human research. Contact: **Oscar Parsons, Ph.D., University of Oklahoma Health Sciences Center, Department of Psychiatry and Behavioral Sciences, P.O. Box 26901, Oklahoma City, Okla. 73190.** Telephone: 405-271-5275. *The University of Oklahoma is an Equal Opportunity Employer.*



# INSECT NEUROBIOLOGY FACULTY POSITIONS

The Arizona Research Laboratories, Division of Neurobiology (ARLDN), a new research unit devoted to cellular, developmental, and molecular neurobiology and neuroethology of insects, invites applications for up to three state-funded, tenure-track faculty positions. These appointments will involve research, teaching, supervision of pre- and postdoctoral trainees, and collaboration with other ARLDN scientists on joint projects.

The disciplines and research areas that will receive special attention in this search are:

1) **Neuroanatomy**—Emphasizing development, functional organization, and synaptology of the insect CNS, and using electron microscopy, intracellular staining, cytochemistry, and correlative physiological methods.

2) **CNS Neurophysiology**—Emphasizing development, synaptic and integrative mechanisms, neuroethology, and membrane physiology, and using intracellular recording and staining.

3) **Molecular Neurobiology**—Emphasizing molecular analysis of neural development and function in insects, and using methods of molecular genetics, protein biochemistry, and hybridoma technology.

Candidates should have a Ph.D. or equivalent degree, at least 3 years of postdoctoral research experience, and a demonstrated dedication to multidisciplinary, collaborative and independent research.

It is anticipated that these positions will be assistant professorships, but particularly qualified candidates at more advanced levels are encouraged to apply. These appointments, in the ARLDN and jointly in an appropriate department of the University of Arizona, will be effective on or after 1 July 1986.

Applications, including curriculum vitae, at least three letters of recommendation, and a brief outline of previous research accomplishments and future research plans, should be sent by 1 October 1985 to: **Neurobiology Faculty Search, ARL Division of Neurobiology, Flandrau Planetarium, University of Arizona, Tucson, Ariz. 85721.**

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

## THE BASEL INSTITUTE FOR IMMUNOLOGY

an international  
basic research laboratory  
is looking for an

### OPERATOR FOR A FLUORESCENCE ACTIVATED CELL SORTER

To operate a new Becton-Dickinson FACS 440 system in collaboration with Institute scientists. Experience in flow cytometry is required, and computer programming skills would be an asset. Some knowledge of German and/or French would be an advantage. To apply for this position or to obtain further information, write to: **Dr. R. Gisler, Basel Institute for Immunology, Postfach, 4002 Basel, Switzerland. Telephone: (61) 49 23 80, extension 240.**

## THE UNIVERSITY OF MELBOURNE FIRST ASSISTANT (CONTINUING OR LIMITED TENURE) IN THE DEPARTMENT OF OTOLARYNGOLOGY

Applications are invited for the position of First Assistant in the Department of Otolaryngology at the University of Melbourne. The department has an active research programme on cochlear implants, electrotactile vocoders, and auditory evoked response audiometry and trains postgraduate students for master of science and doctor of philosophy degrees.

The department has an active teaching programme and trains 30 postgraduate students each year in audiology. It also runs a master's degree by course work or in audiology. The department is also involved in teaching undergraduate medical students and participates in the postgraduate training of E.N.T. surgeons.

Applicants should have a postgraduate qualification in E.N.T. surgery (F.R.A.C.S. or its equivalent). Research experience in otology and/or audiology is desirable.

An appointment may be made for 3 years or on a continuing basis, depending on the qualifications and experience of the successful applicant.

Salary in the range A\$42,032 to A\$46,397 per annum.

Further printed information regarding details of application procedure and conditions of appointment is available from the Appointments Officer (Academic).

Applications, in duplicate, including names and addresses of at least three referees and quoting position number 577 0010, should be addressed to: **Staff Officer, University of Melbourne, Parkville, Victoria 3052, Australia, and close on 30 September 1985.**

*Equal Opportunity in Employment is the policy of the University of Melbourne. Selection is based on merit and all applications will be assessed regardless of sex, race, ethnicity, or disability.*

*Applications from both men and women are invited for all vacancies.*

## DIRECTOR, GEOPHYSICAL INSTITUTE UNIVERSITY OF ALASKA-FAIRBANKS (UAF)

Applications and nominations are invited for the position of **Director** of the Geophysical Institute. The new director will replace Dr. Juan G. Roederer who has indicated his desire and intent to resume full-time professional activities at UAF in research and instruction on 1 September 1986 after serving 9 years as director. The director provides scientific leadership and has administrative and budgetary responsibility for the research programs of the Institute in solar-terrestrial physics and aeronomy, meteorology and climatology, glaciology, geology, and solid-earth geophysics. Graduate studies leading to the M.S. and Ph.D. degrees in all of these fields are conducted through the College of Natural Sciences with many thesis research projects carried out within and supported by the Geophysical Institute. The current budget of the Institute exceeds \$10 million of which 65 percent is derived from grants and contracts, and involves 38 faculty, 101 technical and administrative staff, and 32 graduate students.

Applicants should be distinguished senior scientists with a doctoral degree or its equivalent in training and experience. Selection criteria will include well documented evidence of substantial contributions to the candidate's field of science in a discipline prominently represented in the research programs of the Institute; well-documented evidence of innovative and successful leadership of substantial and major scientific research activities, including the procurement of funds to support such activities; evidence of ability to communicate effectively with peers, support staff, sponsors of research projects, and the general public; and administrative/managerial/fiscal experience in the planning and supervision of major projects. U.S. citizenship and prior involvement with research and instruction in polar regions will be advantageous.

The Search Committee for director will begin its evaluation of applicants on 1 October 1985. The appointment, expected to be offered about 1 February 1986 and effective 1 September 1986, will be made by the Chancellor of the University of Alaska, Fairbanks, with the concurrence of the President of the National Academy of Sciences according to the Act of Congress which established the Geophysical Institute in 1946. The appointment normally carries with it a tenured full-professorship in an appropriate academic department of the University.

*The University of Alaska is an Equal Opportunity/Affirmative Action Employer.* For further information, write to: **Albert E. Belon, Search Committee Chairman, Geophysical Institute, University of Alaska, Fairbanks, Alaska 99775-0800, or telephone: 907-474-7282.**

**FACULTY POSITIONS** available at assistant, associate, and full professor levels in the newly established Center for Biotechnology. The Center consists of three divisions: (i) Hybridoma Technology, (ii) Recombinant DNA Technology, and (iii) Cellular and Molecular Neurobiology. Applicants should have research background in one of these areas. Experience and interest in biotechnological applications are desirable but not required. Please send résumé, a brief description of research experience and future goals, and names of several references to:

**Dr. Dominic Man-Kit Lam  
Director  
The Center for Biotechnology  
Cullen Eye Institute  
Houston, Texas 77030**

## POSITIONS OPEN

**ASSISTANT PROFESSOR POSITION IN AUTONOMIC VASCULAR PHARMACOLOGY** available, tenure-track, beginning 1 January to 1 July 1986. The candidates should have an interest in studying the basic processes involved in the regulation of vascular tone. They must have a Ph.D. or M.D. degree and two or more years of postdoctoral training and experience in some of the newer and sophisticated techniques that can be applied to their area of research. Candidates must be prepared to fulfill moderate teaching responsibilities in medical, undergraduate and graduate courses and to establish a vigorous and productive independent research program. *Women and minority candidates are encouraged to apply.* Letters of application, curriculum vitae, a brief description of research and career goals, and the names of three references must be received by 31 October 1985. Address to: **Chairman, Search Committee, Department of Pharmacology, College of Medicine, University of Vermont, Burlington, Vermont 05405.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR.** Applications are invited for a position at the level of assistant professor (tenure-track) in the Department of Chemistry at Stanford University with primary research and teaching interests in inorganic chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching undergraduates as well as graduates. In applying, send curriculum vitae, list of publications, a brief statement of research interests (three pages or less) and, in addition, have three letters of recommendation sent to: **Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, California 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in employment, and we are especially eager to identify minority persons and women with appropriate qualifications.* Applications should be received by 1 November 1985.

### ASSISTANT/ASSOCIATE PROFESSOR IN IMMUNOLOGY

The Department of Microbiology invites applications for a faculty appointment at the Medical College of Ohio. Candidates must have a Ph.D. or M.D., at least 2 years of postdoctoral experience, and well-developed research goals. Individuals with interest in molecular-genetic approaches are particularly encouraged to apply, though others will be considered. The position represents a 12-month, tenure-track appointment and involves the pursuit of an independent research program; participation in teaching graduate, medical, and nursing students; and participation in departmental and college activities such as the seminar programs. Send curriculum vitae, names of three references, and a two- to three-page statement of research goals to: **Dr. Earl H. Freimer, Chairman, Department of Microbiology, Medical College of Ohio, C.S. Number 10008, Toledo, Ohio 43699.**

*Equal Opportunity Employer*

**ASSISTANT/ASSOCIATE PROFESSOR OF MICROBIOLOGY**—The University of New England College of Osteopathic Medicine (UNECOM) invites applications for a faculty position with teaching responsibilities in medical microbiology. Preference will be given to applicants with experience in clinical microbiology, immunology, and/or parasitology specialties. Position available 1 September 1985. Salary: competitive. The University of New England is located on the southern coast of Maine a few miles from Portland and 90 miles north of Boston. Submit résumé and three letters of recommendation to: **Dr. James F. Novotny, Department of Microbiology, University of New England College of Osteopathic Medicine, 11 Hills Beach Road, Biddeford, Maine 04005.** *UNECOM is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR—INSECT MOLECULAR BIOLOGIST.** Tenure-track. Duties include: research (90 percent) emphasizing application of molecular biology and genetic engineering methodologies in development and/or enhancement of entomopathogens; teaching (10 percent). Qualifications include a Ph.D. in entomology or appropriate biological science. Salary commensurate with qualifications and experience. Send résumé, transcripts (post-secondary education), a statement of research and teaching goals, list of publications (include reprints), and arrange for four letters of reference to be forwarded to: **Dr. B. C. Pass, Chair, Department of Entomology, University of Kentucky, Lexington, Ky. 40546.** Application deadline is 15 October 1985.

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR, MOLECULAR GENETICS.** The Departments of Animal Science and Reproduction at the University of California, Davis, invite applications for a tenure-track appointment at the assistant/associate professor level. Applicants must have a Ph.D. or equivalent, with training in molecular genetics. Preference will be given to applicants with interest in applying recombinant DNA technology to mammals. Background and interest in domestic animal production and health are highly desirable. Candidates will be expected to develop an independent research program in molecular genetics that brings an innovative approach to domestic animal production and health and to participate in undergraduate, graduate and veterinary medical teaching and advising. Applicants should submit curriculum vitae, transcripts, statement of research and teaching interests and background, bibliography, and the names and addresses of three persons familiar with their work by 31 October 1985 to: **G. B. Anderson, Chairman, Search Committee, Department of Animal Science, University of California, Davis, California 95616.**

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

**BIOCHEMIST** for position in cancer research to study cellular biochemical pharmacology and metabolism of anti-pyrimidines and anti-purines. New York City-based major cancer research institution. Applicants should submit curriculum vitae to: **Box 176, SCIENCE**

**BIOCHEMISTRY/CELL BIOLOGY POSTDOCTORAL** positions are available 1 October to study roles of  $Ca^{2+}$ , protein kinase C, cAMP, calmodulin and oncogene products in cell proliferation and carcinogenesis. Reply with curriculum vitae, names of three references, and brief outline of experience and expertise to: **Dr. Alton Boynton, Cancer Research Center of Hawaii, 1236 Laulaha Street, Honolulu, Hawaii 96813.** Telephone: 808-548-8563. *An Equal Opportunity Employer.*

**CHAIRPERSON OF PHARMACOLOGY.** We are seeking an enthusiastic, innovative individual, with administrative experience and a strong basic science research record, who will develop quality graduate and undergraduate training programs and novel intra- and interdepartmental research. Significant opportunity for program expansion and for working with other basic and clinical scientists. Applicants should send their curriculum vitae and three references to: **Michael Alan Taylor, M.D., Chairman, Search Committee for Chair of Pharmacology, Department of Psychiatry, University of Health Sciences (UHS)/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.** *UHS/The Chicago Medical School is an Equal Opportunity/Affirmative Action Employer.*

**THE OHIO STATE UNIVERSITY—CHAIRPERSON AND PROFESSOR,** Department of Poultry Science. Candidates must hold a Ph.D. in poultry science or a closely related field; have a successful record in research and experience in teaching or extension; demonstrated leadership ability; interest in both basic and applied research; dedication to quality graduate and undergraduate education. Salary is negotiable and commensurate with qualifications and experience. Send curriculum vitae and names and addresses of three references by 30 September 1985 to: **Dr. David Latshaw, 674 West Lane Avenue, Columbus, Ohio 43210.**

*Equal Opportunity/Affirmative Action Employer*

### FACULTY POSITION IN ENDOCRINOLOGY DIRECTOR, DIABETES CENTER

Applications are invited for a position at the level of assistant professor to establish and direct a Diabetes Center in the Section of Endocrinology and Metabolism at Rush Medical College and the Rush-Presbyterian-St. Luke's Medical Center. Successful candidates should be Board-certified in medicine and endocrinology and have strong clinical and research interests in a diabetes-related area.

Responsibilities include participation in teaching and patient care within a division newly committed to both clinical and basic research in the role of hormones in the etiology and development of atherosclerosis. Inquiries and résumé to:

**John D. Bagdade, M.D.  
Section of Endocrinology and Metabolism  
Rush-Presbyterian-St. Luke's Medical Center  
1753 West Congress Parkway  
Chicago, Ill. 60612**

*Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### CHIEF OF STAFF

The Milwaukee VA Medical Center is seeking an experienced physician for the position of **Chief of Staff.** The Medical Center is a Dean's Committee Hospital affiliated with the Medical College of Wisconsin, and has 683 acute beds, a 200-bed Nursing Home Care Unit, and a 400-bed Domiciliary. Applicants should have administrative experience, ideally within the VA system, and should have experience in clinical teaching and/or investigation. Academic appointment in the appropriate department is available based on prior experience. Send curriculum vitae and three references to: **Thad C. Hagen, M.D., Chief, Medical Service, VA Medical Center, 5000 West National Avenue, Milwaukee, Wis. 53193,** by 13 September 1985. *An Equal Opportunity Employer.*

**CYTOGENETICIST** position—Master's degree or Ph.D.-level position in a large clinical laboratory across from the National Institutes of Health; cytogenetics associated with AFP program, stem cell assay and in vitro fertilization program. Send curriculum vitae or résumé plus letters of reference to: **Dr. Debra Saxe, Molecular Medicine, Inc., 5606 Shields Drive, Bethesda, Md. 20817.**

### DIRECTOR, PUBLIC AFFAIRS OFFICE

Director, Public Affairs Office for the Ecological Society of America (ESA). Scientific credentials in ecology or experience in related environmental areas; graduate degree preferred. Experience in public affairs essential, especially at the state and federal level. Familiarity with other professional societies and national scientific organizations. Maturity, judgment, and administrative/organizational skills necessary. Applicant must be able to work independently and effectively, have good interpersonal abilities, and possess persuasive communication skills. Salary up to \$50,000, negotiable based upon experience. Job description available upon request. Applicants should submit: statement of interest in this position; résumé; and three letters of reference emphasizing both scientific credentials and experience in public-affairs-related activities. Reply to: **Dr. David E. Reichle, Chairman, ESA Public Affairs Committee, Oak Ridge National Laboratory, P.O. Box X, Building 1505, Oak Ridge, Tenn. 37831,** by 1 October 1985. *The Ecological Society of America is an Affirmative Action/Equal Opportunity Employer.*

**ELECTRON MICROSCOPIST**—The Department of Pharmacology at the University of Vermont is seeking an individual with experience in transmission electron microscopy to provide primary assistance in the planning, organization, and execution of research projects on the cardiovascular system and its innervation. Facilities include JEOL 100 CX11 electron microscope with analytical Temscan system and Cambridge S.E.M. 100. Evidence of research creativity and resourcefulness is advantageous. *Women and minority candidates are encouraged to apply.* Deadline for application: 30 September 1985. Send résumé and references to: **John A. Bevan, M.D., Chairman, Department of Pharmacology, College of Medicine, University of Vermont, Burlington, Vermont 05405.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer.*

### ENVIRONMENTAL CHEMISTS

The California Public Health Foundation has available in Berkeley several positions to conduct chemical analysis, develop standardized methodologies, and carry out focused research on environmental contamination under contract to the California State Department of Health Services.

The positions are divided into five levels, so a wide range of knowledge and abilities can be considered. Applicants may be recent college graduates in chemistry, chemists with undergraduate degrees with various levels of experience, or chemists with master's and Ph.D. degrees with varying amounts of research experience. All individuals should demonstrate interest and capability in conducting analyses with environmental materials.

The ideal candidate will have experience conducting research using state-of-the-art instrumentation and developing new processes and procedures to analyze hazardous chemicals in minute quantities in virtually any form.

The Foundation is a not-for-profit California corporation providing a variety of services to the public health scientific community associated with implementation of government policies. Applicants should send a résumé or curriculum vitae to: **Philip Brodzinsky, P.O. Box 520, Berkeley, California 94701.** *The Foundation is an Equal Opportunity Employer.*

**FACULTY POSITIONS IN  
MOLECULAR BIOLOGY  
DEPARTMENT OF BIOLOGY  
BOSTON UNIVERSITY**

The Department of Biology, Boston University, announces two tenure track openings at the **Assistant Professor** level in the area of **Molecular Biology**. These new appointments are part of Boston University's commitment to expand and strengthen the basic sciences. Applicants should have postdoctoral training, demonstrate excellent potential to develop a strong, externally funded research program, and be qualified to teach at both the undergraduate and graduate levels in their area of specialization. All exceptionally qualified applicants in the general area of molecular biology will be considered; however, we are especially interested in candidates whose research involves problems in eukaryotic molecular biology. Areas of interest include the regulation of gene expression in growth and development, the use of recombinant DNA techniques to study structure and function, and molecular virology and/or immunology. Successful applicants will also be expected to complement the research strengths of existing faculty, which include mechanisms of inter-cellular communication, membrane biology, nucleic acid biochemistry, and developmental biology at the cellular level. Submit curriculum vitae, statement of research interest, reprints, and the names of at least three referees to:

**Professor David Shepro**  
Chair, Molecular Biology Search Committee  
Department of Biology  
Boston University  
2 Cummington Street  
Boston, MA 02215

Boston University's policies provide for equal opportunity and affirmative action in employment and admission to all programs of the University.

## Anaquest



### Research Pharmacologist

#### Central New Jersey Area

Anaquest, a Division of BOC, Inc., a worldwide leader in the development and manufacture of specialized drug products, has an exceptional opportunity for a Research Pharmacologist interested in immediate responsibility.

You will assess cardiovascular/respiratory effects of anesthetics, analgesics and neuromuscular blocking drugs. These will involve hemodynamic elevation, blood gas analysis and inhalation anesthesia models.

You should have a Ph.D. and 1-3 years' post-doctoral or industrial experience as well as an expertise with computers, a current publication record and excellent written and oral communication skills. Additional experience with *in vitro* systems is strongly preferred.

In addition to a competitive salary/benefits package, you'll play an integral role in helping to further develop our Cardiovascular Research area. For immediate consideration, send your resume and salary requirements, to: Human Resource Department, Anaquest, 2005 West Beltline Hwy., Madison, WI 53713.

An equal opportunity employer M/F/V/H.

**BOC Health Care**

# BIOGEN

is an international biotechnology company with laboratories in Switzerland, Belgium and the United States in the development of new pharmaceutical products through genetic engineering.

Vacancies now exist in our **Geneva** facility for well qualified scientists who are skilled in the areas of:

**Cell Biology  
Protein Chemistry  
Fermentation Technology  
Immunology.**

Post doctoral positions are also available in these areas.

We offer a challenging scientific career with the opportunity to interact with talented colleagues in a stimulating environment.

If this offer appeals to you, then reply to:

Rita GLOOR, Personnel Manager, **BIOGEN S.A.**, route des Acacias 46, 1227 Geneva, Switzerland

Please send your resume and a list of three individuals who may be contacted for references on your behalf. All replies will be evaluated in confidence.

### Conference on PHYSIOLOGICAL ADAPTATION OF MAN IN SPACE

**Houston, Texas — February 10-13, 1986**

#### 7th IAA Man in Space Symposium

##### Sponsored by:

National Aeronautics and Space Administration  
Universities Space Research Association  
Baylor College of Medicine  
International Academy of Astronautics

**Topics to be covered include:** Neurovestibular Physiology, Sensorimotor Physiology, Space Motion Sickness, Adaptation to Zero-g, Readaptation to Earth-g, Cardiovascular Deconditioning during Spaceflight, Fluid Shifts during Microgravity Exposure, Biochemical Effects of Cardiovascular Adaptation and Countermeasures, Physiological Aspects of Extravehicular Activity.

**Abstracts**, not to exceed 400 words in length, are invited by the Program Committee. Deadline for submission is September 15. Abstracts should be sent to: Space Adaptation Symposium, Space Biomedical Research Institute, Code SB, Johnson Space Center, Houston, Texas, USA, 77058. A registration fee of \$50 US will include a copy of the proceedings.

**Program Committee:** K. Klein, J. Vanderploeg, Co-chairmen  
B. Alford, H. Barber, A. Benson, A. Berthoz, F. Bonde-Petersen,  
M. Bungo, M. Cohen, N. Daunt, O. Gazenko, A. Guell, M. Igarashi,  
H. Jenkins, P. Johnson, J. Lackner, K. Money, A. Nicogossian, H. Oser,  
P. Rambaut, M. Reschke, D. Watt, J. Waligora, L. Young

For additional information contact:  
Space Adaptation Symposium  
c/o The Office of Continuing Education  
Baylor College of Medicine  
Texas Medical Center  
Houston, Texas, USA 77030





## Analytical, Physical, and Structural Chemistry

The Analytical, Physical, and Structural Chemistry Department of SK&F Laboratories is continuing its search for a Ph.D. Chemist interested in applying Inductively Coupled Plasma and Atomic Absorption techniques to problem solving in R&D. The selected candidate will interact with synthetic, inorganic, and biological chemists to develop and implement spectroscopic methods of elemental analysis; validate procedures with respect to accuracy, precision, and sensitivity; provide data for inclusion in IND and NDA documents; operate and maintain AA and ICP spectrometers; remain current in state-of-the-art spectroscopic elemental analysis and where appropriate, introduce the relevant techniques to SK&F.

We require a Ph.D. in Chemistry with recent training in ICP an AA Spectroscopy, experience with array processors, the ability to work with computers, and excellent problem-solving and communication skills. Experience with vacuum ultraviolet spectroscopy and PLC is preferred.

Presently located in Philadelphia, the Department will be relocating to a new state-of-the-art Research and Development facility near Valley Forge, PA. We offer an excellent salary, benefits, and relocation package as well as the opportunity for personal and professional growth. Please forward your resume to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1580 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## Peptide Chemistry

The Peptide Chemistry Department of SK&F Laboratories is seeking an outstanding chemist interested in synthesis, purification and characterization of peptides; synthesis of unusual amino acids and peptide bond replacements; optimization of synthetic reactions and scale-up of syntheses; assisting in the design of biologically active peptides; and analyzing biological results in the context of structure-activity relationships.

The successful candidate must have:

- M.S. in Organic Chemistry or equivalent or a B.S. in Chemistry with a minimum of three years experience.
- Minimum of two years experience in synthesis, purification and characterization of organic compounds.
- Experience with modern analytical techniques including HPLC, column chromatography, and the interpretation of NMR and mass spectra.

Located near Valley Forge, PA, in a new state-of-the-art research facility, we offer an excellent salary, benefits, and relocation package as well as the opportunity for personal and professional growth. Please forward your resume to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1556 Spring Garden Street, Philadelphia, PA 19101. All replies will be kept confidential. We are an equal opportunity employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## POSITIONS OPEN

**THE UNIVERSITY OF MICHIGAN, DEPARTMENT OF PSYCHIATRY**, has a senior tenure-track position as **DIRECTOR** of the Clinical Studies Unit for Affective Disorders. Responsibilities include the development and leadership of the patient care, basic and clinical research and training efforts of the research in affective disorders with a special interest in hypothalamic-pituitary-adrenal regulation. Board-certification in psychiatry as well as experience in the administration of a clinical research program is required: evidence of extramural funding support is highly desirable. Candidates should submit curriculum vitae and the names of three references to: **John F. Greden, M.D., Professor and Chairman, Department of Psychiatry, University of Michigan Medical Center, Ann Arbor, Mich. 48109. The University is an Affirmative Action Employer.**

**FACULTY POSITION** available, tenure-track, in **molecular genetics**, with a special interest in membranes. Applicants should have research background in recombinant DNA technology (preferably also in somatic cell genetics) and working knowledge of membrane proteins. M.D. and/or Ph.D. in appropriate field required. Successful candidate will hold tenure-track appointment (assistant or associate professor, depending upon qualifications) in Department of Physiology and Molecular Biophysics at Baylor College of Medicine. Joint appointments in relevant academic departments also possible. Laboratory space and basic equipment provided and initial laboratory support available. Successful candidate will devote majority of his/her effort to establishing and maintaining an independent research program related to the main interests of the Department. The department is building a strong program in membrane biophysics with expertise in electrophysiology, membrane biochemistry, reconstitution, and modelling. Send curriculum vitae, a brief description of past and present research experience, and names of three or more references to: **Dr. A. M. Brown, Incoming Chairman, Physiology and Molecular Biophysics Department, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030. An Equal Opportunity/Affirmative Action Employer.**

University of Missouri-Columbia invites applications for **TWO TENURE-TRACK FACULTY POSITIONS** in **molecular biology/cell biology/biochemistry/reproductive physiology** in the Food for the 21st Century Program at the University of Missouri-Columbia. Applicants must have a Ph.D. in an appropriate field and preferably have postdoctoral research experience. Preference will be given to candidates with experience in one or more of the following areas: recombinant DNA technology, gene transfer studies, reproductive immunology, protein chemistry, cell proliferation and growth. Applicants should submit curriculum vitae, a short description of their proposed research, and the names of three references to: **Dr. R. Michael Roberts, 159 Animal Sciences Center, University of Missouri-Columbia, Columbia, Mo. 65211, by 1 November 1985. The University of Missouri is an Equal Opportunity Employer.**

University of Missouri-Columbia invites applications for a **POSTDOCTORAL POSITION** in the Department of Biochemistry. Position requires an individual with a Ph.D. degree in biochemistry or related field to study the function, control of synthesis and secretion of lysosomal-like enzymes within the reproductive tract. Some experience in protein purification, peptide analysis, and enzymology would be helpful. Send curriculum vitae with the names of three referees to: **Dr. R. Michael Roberts, 159 Animal Sciences Center, University of Missouri-Columbia, Columbia, Mo. 65211, by 1 November 1985. The University of Missouri is an Equal Opportunity Employer.**

University of Missouri-Columbia invites applications for a **RESEARCH ASSISTANT PROFESSOR** position in the Department of Biochemistry. Applicant should have a Ph.D. degree and experience in one or more of the following areas: recombinant DNA techniques, protein chemistry and purification, hybridoma technology, reproductive physiology. Individual hired will join a multidisciplinary research group applying biotechnology towards improving the fertility of the large domestic animals. Send curriculum vitae with the names of three referees to: **Dr. R. Michael Roberts, 159 Animal Sciences Center, University of Missouri-Columbia, Columbia, Mo. 65211, by 1 November 1985. The University of Missouri is an Equal Opportunity Employer.**

## POSITIONS OPEN

**DIRECTOR, Hopkins Marine Station (HMS)**  
Department of Biological Sciences  
Stanford University

The Department of Biological Sciences of Stanford University seeks a distinguished **biologist** to serve as **professor and director** of the Hopkins Marine Station. The director will hold an endowed chair and will be appointed as professor of biological sciences at Stanford University. The director will be expected to provide scientific leadership with an established, vigorous research program in the area of cell, developmental, molecular, environmental, organismal, and/or population biology. The director's responsibilities include the provision of leadership for faculty expansion and for development of innovative teaching programs at the Station.

Applicants should submit curriculum vitae and the names of three persons willing to serve as references to:

**Chairman, HMS Search Committee**  
Department of Biological Sciences  
Stanford University  
Stanford, Calif. 94305

*Stanford is an Equal Opportunity Employer.*

**THE UNIVERSITY OF MICHIGAN, DEPARTMENT OF PSYCHIATRY**, has a senior tenure-track position as **DIRECTOR** of the Sleep Depression Unit of the Michigan Depression Program. The Unit is also an integral part of the University's Sleep Disorders Center. Responsibilities include development and leadership of the patient care, basic and clinical research, and training efforts of the unit. Position requires a commitment to and evidence of ability in sleep research with a focus on affective disorders. Board-certification in psychiatry and experience in the operation of a sleep study facility are required. Candidates should submit curriculum vitae and the names of three references to: **John F. Greden, M.D., Professor and Chairman, Department of Psychiatry, University of Michigan Medical Center, Ann Arbor, Michigan 48109. The University of Michigan is an Affirmative Action Employer. Code 80H0.**

The Chemistry and Biochemistry Department of the University of California, Los Angeles, is considering making a regular **FACULTY APPOINTMENT IN ORGANIC CHEMISTRY**. The appointment will probably be at the assistant professor level, but applicants for senior level positions will also be considered. The department is particularly interested in applicants specializing in synthetic organic chemistry, but applicants with interests in other areas of organic chemistry will also be considered. Candidates must give evidence of potential distinction in scholarship and teaching and of a creative and active career as a research scientist. Applicants for more senior positions must demonstrate an exceptional record of accomplishment in these areas.

*The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority candidates.* A complete application should include curriculum vitae, a one- to two-page description of proposed research, and letters of recommendation from at least three professional references. Applications should be completed by 1 November 1985 and directed to: **Chairman, Organic Search Committee, Department of Chemistry and Biochemistry, University of California, Los Angeles, Calif. 90024.**

**FACULTY POSITION IN CHEMICAL OCEANOGRAPHY**—The College of Marine Studies of the University of Delaware is planning to add a new tenure-track faculty member in chemistry to the Oceanography Program. Candidates will be considered at either assistant or associate professor level in organic, physical, or geochemical oceanography. Candidates should have a strong background in field research; coastal and estuarine interests are desirable. The position can be filled immediately. The person hired will have the opportunity to develop independent and cooperative research with existing interdisciplinary estuarine and coastal research programs. The College has modern research facilities in both Lewes and Newark and the 120-foot research vessel *R/V Cape Henlopen*. Teaching at the graduate level will be required and the development of funded research programs and advisement of M.S. and Ph.D. students will be expected. Applicants should send curriculum vitae and names of three references to the chairman of the search committee: **Dr. Jonathan H. Sharp, Oceanography Program, College of Marine Studies, UNIVERSITY OF DELAWARE, Lewes, Del. 19958. Telephone: 302-645-4259. Closing date for applicants is 30 September 1985. The University of Delaware is an Affirmative Action/Equal Opportunity Employer.**

#### VICE PRESIDENT FOR CORPORATE AFFAIRS

Associated Universities, Inc. (AUI) invites nominations and applications for the position of vice president for corporate affairs. AUI is a nonprofit corporation with headquarters in Washington, D.C., engaged in the management of scientific research, both basic and applied. Under a contract with the Department of Energy, AUI operates Brookhaven National Laboratory at Upton, New York, and under a contract with the National Science Foundation AUI operates the National Radio Astronomy Observatory with facilities in Green Bank, West Virginia; Charlottesville, Virginia; Tucson, Arizona; and Socorro, New Mexico.

The vice president for corporate affairs reports directly to the president and must interact effectively with the board of trustees and senior laboratory and observatory management. It is desirable that the candidate also be qualified to fulfill the requirements of the office of controller of the corporation. The responsibilities of these offices include contract negotiation and administration, corporate fiscal management, audit oversight, corporate office operations, and participation in the development and administration of corporate policies.

Candidates should be experienced administrators with demonstrated abilities in leadership and management in the broad scientific environment that includes federal agencies, universities, national laboratories, industrial laboratories, and related research institutions.

Applications or nominations are requested by 23 September 1985. Inquiries, nominations, or applications with résumés should be directed to:

**Chairman of the Search Committee**  
Associated Universities, Inc.  
1717 Massachusetts Avenue, NW, Suite 603  
Washington, D.C. 20036

*AUI is an Equal Opportunity/Affirmative Action Employer.*

#### STAFF DIRECTOR OCEAN STUDIES BOARD

The Ocean Studies Board maintains broad oversight of national and international ocean science affairs and related policy issues, and conducts studies and provides guidance to federal agencies in these areas. The Staff Director, in consultation with the Board Chairman, is responsible for the overall planning, management, and direction of the Board's activities. Responsibilities include identification of issues; preparation of agenda, minutes, and draft reports; maintaining liaison with Board members, other activities of the National Research Council, government agencies, and the scientific community in general; administration and fiscal management of Board activities and supervision of the Board's staff.

Qualifications for the position include an earned doctorate in ocean science or related physical or biological sciences, or equivalent scientific or managerial experience, together with current familiarity with the national and international marine science programs, coupled with an understanding of related economic and policy issues. Expertise in oceanography or related fields is required, together with demonstrated capabilities in management, administration, and organization of scientific activities. Strong and demonstrated capabilities in oral and written expression are needed.

The NRC offers an excellent compensation and benefits program. For consideration, please send resume to:

**Personnel Office (JH 304)**  
**NATIONAL RESEARCH COUNCIL**  
2101 Constitution Avenue, N.W.  
Washington, D.C. 20418

*An Equal Opportunity Employer*



National Research  
Council Canada

Conseil national  
de recherches Canada

## 1986 RESEARCH ASSOCIATESHIPS

for research in science and engineering in the laboratories  
of the NATIONAL RESEARCH COUNCIL OF CANADA

The National Research Council is Canada's leading federal research organization. NRC's laboratory projects cover most areas of the physical sciences, natural sciences and engineering.

Applicants for Research Associateships should have recently acquired a Ph.D. in the natural sciences or a Master degree in an engineering field or expect to obtain the degree before taking up the Associateship.

Associateships are open to nationals of all countries although preference will be given to Canadians.

Research Associates will be offered appointments to the staff of the National Research Council on a term basis and will be offered salaries and benefits currently available to members of the continuing staff. As a guide, the current Ph.D. recruiting rate is \$30,360 per annum.

The initial appointment will normally be for a two-year term and may be renewed, subject to the Associate's performance and subject to the requirements of the Division.

Applications may be obtained from the Research Associates Office, National Research Council of Canada, Ottawa, Ontario, Canada K1A 0R6.

**Closing date: 30 November 1985**

Canada

## BIOANALYTICAL CHEMIST

### Research Chemist, Pesticide Metabolism, Residue & Environmental Chemistry

Mobay Chemical Corporation, Agricultural Chemicals Division, has an immediate opening for a PhD Biochemist to conduct investigations on the metabolism and fate of new and established pesticides in plants, animals and environmental substrates and to develop analytical methods for pesticide residues in the corresponding matrices. Previous experience in these particular areas is desirable. Excellent communication skills are essential.

Expertise in the following areas is preferred: radio tracer work, statistics, pharmacokinetics, derivatization, and computer programming.

Position offers a competitive salary and comprehensive paid benefits package including complete relocation. Send resume and salary history to: **R.M. Dischner, P.O. Box 4913, Kansas City, Mo. 64120**

We Are An Equal Opportunity Employer... M/F/Handicapped



**Mobay  
Chemical  
Corporation**

## POSITIONS OPEN

### FACULTY OPENING

The Cardiology Division at the University of Texas Health Science Center in Dallas, Texas, wishes to recruit an **assistant professor of medicine** with at least 3 years combination in residency/fellowship in internal medicine and cardiology and with at least 2 years of experience at a faculty level in: (i) clinical cardiology teaching and investigation, and (ii) basic research studies in myocardial metabolism. Interested applicants should send their curriculum vitae and three letters of recommendation to: **James T. Willerson, M.D., The University of Texas Health Science Center, 5323 Harry Hines Boulevard, Room L5.134, Dallas, Tex. 75235. Equal Opportunity/Affirmative Action Employer.**

**HEAD, DEPARTMENT OF PHYSIOLOGICAL SCIENCES.** The College of Veterinary Medicine, Oklahoma State University, invites nominations and applications for the position of head for the Department of Physiological Sciences. Candidates should possess D.V.M. and Ph.D. degrees or their equivalents in one of the departmental disciplines which include anatomy, physiology, physiological chemistry, pharmacology, and toxicology. Candidates should have demonstrated capabilities in education and research, and should show potential for leadership and administration. The head is responsible for administering the activities of the department and for participating in the teaching, research and/or service programs of the department. He/she will serve as a member of the Administrative Council of the College and will provide leadership in developing educational, research and service activities of the department. Send nominations or applications to: **Chairman, Physiological Sciences Search Committee, College of Veterinary Medicine, Oklahoma State University, Stillwater, Oklahoma 74078.** Applications should include curriculum vitae with a list of at least three references. To assure full consideration, applications should be received by 1 November 1985. Appointment is planned for 1 March 1986, or as soon thereafter as possible.

*Oklahoma State University is an Equal Opportunity/Affirmative Action employer.*

**IMMUNOLOGY.** Applications are invited from individuals with demonstrated excellence in immunology for a tenure-track assistant/associate professorship in the Department of Microbiology at the Medical College of Wisconsin. Applicants must have postdoctoral research training and be able to develop an independent research program, teach medical students, and instruct graduate students. Send résumé, summary of proposed research, and names of references to: **Search Committee, Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, Wisconsin 53226.**

*Affirmative Action/Equal Opportunity Employer*

### MOLECULAR BIOLOGIST

Tenure-track position at the assistant professor level for a molecular biologist. Applicant must have at least 2 years of postdoctoral experience and demonstrated accomplishment in eukaryote gene expression studies. Expertise in recombinant DNA technology essential. Ph.D. or M.D. Send curriculum vitae, a statement of research interest, and the names and addresses of three references to: **Dr. Ralph Weichselbaum, Professor and Chairman, Department of Radiation Oncology, Biological Sciences Division, The University of Chicago, Box 440, 5841 South Maryland Avenue, Chicago, Ill. 60637. An Affirmative Action/Equal Opportunity Employer.**

**MOLECULAR BIOLOGIST**—The Department of Pathology in the College of Medicine at the University of Florida is seeking a molecular biologist (Ph.D. and/or M.D.) to fill a tenure-track position at the assistant or associate professor level. Research experience in human molecular genetics, especially involving the HLA complex is highly desirable. The successful candidate will be expected to develop an independent research program in human molecular genetics, participate in the education and training of graduate students, and provide technical expertise for the development of a Clinical Pathology Laboratory of Molecular Biology. Starting date for position is 1 January 1986.

Applicants should submit their curriculum vitae, plus copies of three publications which best exemplify their work, and the names of three referees to: **Raul C. Braylan, M.D., Professor Box J-275, Department of Pathology, University of Florida College of Medicine, Gainesville, Florida 32610.** Recruiting deadline is 1 November 1985.

*Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**FISHERY SCIENTIST.** Mote Marine Laboratory (MML), an independent, nonprofit organization, seeks to fill a scientist position. Requirements are: (i) Ph.D. or equivalent; (ii) experience in fisheries research. MML is committed to programs of habitat, aquaculture, larval rearing, reproductive, and trophic studies in Florida; therefore, experience with Southeastern Marine and Estuarine Fisheries is desirable. The position will involve research, publications, obtaining grant funds, and supervision. Salary is commensurate with qualifications. Send detailed résumé, copies of publications, and names and addresses of three references before 15 September to: **Dr. K. Mahadevan, Mote Marine Laboratory, 1600 City Island Park, Sarasota, Fla. 33577.**



### IMMUNOLOGIST

Nova Pharmaceutical Corporation, a young company dedicated to the discovery of novel therapeutic and diagnostic products using the most current techniques, has an immediate opening for an immunologist/geneticist/molecular biologist with 2 to 6 years of postdoctoral training and at least 1 year of industry experience. Some previous chemistry background is preferred, and experience with hybridoma techniques and ELISA assays is essential.

Nova occupies new facilities at the Francis Scott Key Medical Center in Baltimore, and has strong intra-campus links with The Johns Hopkins University, NIDA, and NIA. Nova has a full complement of chemical, biochemical, and pharmacological support personnel.

Nova offers competitive salaries and an excellent benefits package. For further information, please submit a current résumé with salary requirements to:

**Lydia K. Cumor  
Personnel Director  
Nova Pharmaceutical Corporation  
5210 Eastern Avenue  
Baltimore, Maryland 21224-2788**

*An Equal Opportunity/Affirmative Action Employer*

**INSECT ECOLOGIST.** Tenure-track position. Candidate will be expected to develop a contemporary research program in insect ecology including problems-solving in grape and orchard crops and be strongly committed to excellence in teaching. Applicant must possess a Ph.D. in entomology or biological science with emphasis in ecology. Preference given to candidate with postdoctoral experience, high quality publications, and demonstrated ability to secure extramural research funds. Submit curriculum vitae, transcript, and names of four references by 15 October 1985 to: **Dr. Robert L. Smith, Chairman, Search Committee, Department of Entomology, University of Arizona, Tucson, Arizona 85721.**

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

**MEDICAL ONCOLOGY,** assistant professor, tenure-track position. Must be University trained, Board-certified in internal medicine and Board-eligible in medical oncology with certification pending. Excellence in patient care, teaching, and research are basic requirements for this position. Prefer clinical research emphasis on solid tumors and lymphomas. Reply with curriculum vitae to: **Joseph C. Allegra, M.D., Professor and Chairman, Department of Medicine, Ambulatory Care Building, Louisville, Kentucky 40292. Affirmative Action/Equal Opportunity Employer.**

### MICROBIAL PHYSIOLOGISTS—BIOCHEMISTS

Difco Laboratories new Research and Development Center has openings for experienced scientists in microbial metabolism and biochemistry. A Ph.D. in microbiology, biochemistry, or chemistry is required and commercial diagnostic experience is preferred. Emphasis is on assays and innovative detection methods for bacteria, bacterial components, and bacterial products in body fluids. Knowledge of clinical microbiology is helpful. Proven leaders with sound records and good potential will be given preference. Please send your résumé, publication list, and the names of three references to: **Darlene Schafer, DIFCO LABORATORIES, Research and Development Center, 1180 Ellsworth Road, Ann Arbor, Mich. 48104. Equal Opportunity Employer, M/F.**

## POSITIONS OPEN

### MASSEY UNIVERSITY PALMERSTON NORTH, NEW ZEALAND DEPARTMENT OF BOTANY AND ZOOLOGY

Applications are invited for **TWO LECTURESHIPS** in the above department. Consideration will be given to suitably qualified applicants, but preference may be given to those with research experience and/or special interests in:-

#### BOTANY

- 1) Plant cell biology
- 2) Population biology
- 3) Plant genetics
- and/or Plant biosystematics

#### ZOOLOGY

- 1) Population biology
- 2) Invertebrate zoology (except Insecta)
- 3) Aquatic zoology
- 4) Development biology

The appointees will be expected to teach internal and extramural students at the undergraduate level, contribute to postgraduate teaching, and establish and develop research in their own field of interest.

Salary on the lecturers scale: NZ\$23,622 to NZ\$27,928.

Further details may be obtained from: **Professor B. P. Springett, Head of Department.** Details of the University and conditions of appointment may be obtained from **A. J. Weir, Registrar,** with whom applications close on 20 September 1985.

### MAMMALIAN CELL BIOLOGIST

A Ph.D. with academic or industrial post-doctoral experience is sought for a position in a multidisciplinary group studying high density mammalian cell culture in the Biotechnology Laboratory of Central Research at The Dow Chemical Company. The successful candidate will have experience in handling multiple cell lines and associated analytical techniques and will have responsibility for the planning, organization, and execution of a high priority program in the development of optimal culture conditions.

For further information, please contact:

**Dr. Kerr Anderson  
Central Research  
Biotechnology Laboratory  
1701 Building  
The Dow Chemical Company  
Midland, Mich. 48674**

### DEPARTMENT OF MOLECULAR BIOLOGY OF VANDERBILT UNIVERSITY

We invite applications for a tenure-track position, the rank dependent upon qualifications. Scientists with experience and research programs in the areas of structural, molecular, cellular, or developmental biology are invited to apply. Candidates qualifying for a senior rank should have a record of distinguished contributions. Other candidates should have already demonstrated their research capabilities. Responsibilities will include development of a strong independent program of research and participation in the teaching program. *Women and minority candidates are especially encouraged to apply.* Please send curriculum vitae, list of publications, summary of research plans, and three letters of reference to: **Dr. Oscar Touster, Chairman, Department of Molecular Biology, Vanderbilt University, Nashville, Tenn. 37235.** Applications are requested by 1 October 1985, but will be accepted as long as necessary to fill the position.

*An Affirmative Action/Equal Opportunity Employer*

### MOLECULAR GENETICIST EMORY UNIVERSITY

The Biology Department of Emory University will be making several appointments in the next few years in the areas of molecular genetics and cell and developmental biology. At present, the department invites applications for a tenure-track appointment in eukaryotic molecular genetics at the level of associate or assistant professor. Candidates should have demonstrated their potential for initiating and sustaining an excellent research program and should have a commitment to quality teaching. Applicants should submit curriculum vitae, a statement of research interests, and the names and addresses of four references to: **Dr. William H. Murdy, Chairman, Department of Biology, Emory University, Atlanta, Ga. 30322.** The search will remain open until the position is filled. *Emory University is an Affirmative Action/Equal Opportunity Employer.*

## POSITION OPEN

### Field Director

#### Postharvest Institute for Perishables

Institute at University of Idaho offers permanent position in USAID-supported program to individual to assist Director in planning, coordination, implementation and evaluation of international loss reduction programs for perishable crops in developing countries. Management of some phases of program required. Responsible for design and implementation of technical assistance and training, and assistance in planning adaptive research projects for developing countries. Requires ability to develop collaborative relations with universities and international donor or research organizations. Assist in preparation and review of activity reports.

**Qualifications:** Master's degree minimum in agriculture-related discipline; knowledge of USAID and other international development agencies, university administrative procedures, and public or private sector budget preparation and financial management; 3 to 5 years experience in developing countries; experience in international private sector agricultural production, marketing and agribusiness; and good writing abilities. Working knowledge of French and/or Spanish desirable.

Domestic and international travel required. Salary commensurate with training and experience.

Position available November 1, 1985. Application deadline October 1.

Send resume and have at least three letters of reference sent to:

Chairman, Field Director Search Committee  
c/o Postharvest Institute for Perishables  
103 Morrill Hall, University of Idaho  
Moscow, Idaho 83843 (208-885-6791)

The University of Idaho is an equal opportunity/affirmative action employer and educational institution.

## Research Opportunities

Travenol Laboratories, Inc., a progressive leader in the health care industry, is offering two unique opportunities for individuals to join our Corporate Research and Development team. Commitment to this important work has created challenging research positions for two scientists:

### Renal Physiologist

Involves setting up in vivo models for renal function studies, and development of new approaches for treating end-stage renal patients. Qualified candidates will have a Ph.D. in physiology, with 1-3 years of postdoctoral experience, and experience with blood flow measurement techniques. Familiarity with large animal models for evaluating systemic and regional hemodynamics is a plus.

### Biochemical Pharmacologist

Responsibilities will include developing the methodology to determine concentration of chemicals in biological fluids, and the set up of state-of-the-art techniques for chemical metabolism and enzyme kinetic studies. Qualified candidates will have a Ph.D. in pharmacology or biochemistry with 3 to 5 years of postdoctoral and/or industrial experience. Demonstrated background in bioanalytical methods development for chemicals in biological fluids, enzyme kinetics and chemical metabolism required.

Travenol provides an excellent salary and benefits package. For consideration, send your resume to:



Human Resources Department  
Travenol Laboratories, Inc.  
Dept. YG  
P.O. Box 490  
Rt. 120 and Wilson Rd.  
Round Lake, IL 60073

Equal Opportunity Employer

## RESEARCH SCIENTIST

### Meet Dynamic New Challenges

with the pacesetter in animal health care products. SALSBURY LABORATORIES now has an exceptional opportunity for a PhD scientist who's ready to tackle new challenges with fresh ideas and innovative approaches. Your background must include a proven record of accomplishment in virology and cell culture research, including vaccine strain development, virus isolation, identification, purification, structural protein characterization and adaptation of cells for cultivation.

As a recognized industry leader, we are prepared to reward your talents with an attractive salary and generous benefits package. You'll also enjoy our progressive, ultra-sophisticated research environment. For confidential consideration, direct your resume to:

William B. Cook,  
Director of Human Resources  
**SALSBURY LABORATORIES, INC.**  
2000 Rockford Rd.  
Charles City, Iowa 50616



Equal Opportunity Employer

## SCIENTIFIC DIRECTORS

### NEUROSCIENCE/ IMMUNOSCIENCE/ MOLECULAR BIOLOGY

Abbott Laboratories has initiated a major expansion of its activities in biomedical research and pharmaceutical product development. Backed by major corporate support, Abbott has created select interdisciplinary groups to explore a wide variety of new therapeutic entities. We are seeking outstanding leaders in research to direct the operations of our programs in: (1) Neuroscience; (2) Immunoscience; and (3) Molecular Biology.

Each of the individuals in the above areas will be expected to lead a highly trained research team and, where appropriate, to recruit additional members for his/her respective group. Candidates should have a Ph.D. in an appropriate discipline, at least 5 years experience in relevant research and an outstanding record of research accomplishment. Strong writing and interpersonal skills are required.

Abbott Laboratories is a diversified organization with annual sales of \$3.1 billion. Its principal offices and pharmaceutical research operations are located in an attractive suburban community near Lake Michigan, just 30 miles north of Chicago. We provide excellent salaries and full benefits including profit sharing and stock retirement plan. For prompt consideration, send a resume with salary history in confidence to: **Christopher George/Corporate Placement**. Abbott is an Affirmative Action Employer. Women and members of minority groups are encouraged to apply.



ABBOTT PARK IL 60064

"HEALTH CARE WORLDWIDE"

## POSITIONS OPEN

### MARINE SCIENCES INSTRUCTOR

Instructor (full-time), M.S. in physical chemistry, to teach courses in basic physical-chemistry and advanced diving. Should know computer programming, operation, maintenance and have advanced diving instructor license, \$1335 monthly. Send curriculum vitae and names of three references to: **Dr. Manuel L. Hernández-Avila, Director, Department of Marine Sciences, University of Puerto Rico, Mayaguez, P.R. 00708.**

**MOLECULAR BIOLOGIST.** Assistant professor, tenure-track, 9-month appointment. Salary/starting date negotiable. Will teach molecular biology, participate in teaching general biochemistry, and develop a strong research program. Ph.D. required. Area of specialization open but molecular neurobiologists are especially encouraged to apply. A complete application must include curriculum vitae, copies of two most significant publications, brief statement of current and future research plans, and three letters of reference. Deadline: 7 October 1985 or until suitable candidate has been selected. Address correspondence to: **T. Snider, Search Committee Chairman, Department of Biochemistry, Colorado State University (CSU), Fort Collins, Colo. 80523.** CSU is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office: 314 Student Services Building.

### MOLECULAR BIOLOGY OF BRAIN TUMORS

The Division of Neurosurgery and the Department of Medical Microbiology and Immunology have an opening for a **research faculty position** for an individual with a primary interest in oncogenes. Candidates should possess a strong background in molecular biology and research experience and interests in some aspect of the role of oncogenes in tumorigenesis. The successful candidate will be expected to develop a strong, independent research program as part of an ongoing research effort in the biology of brain tumors. The position includes a liberal start-up package in an environment with strong support in molecular biology and the neurosciences. Appointment is on a 12-month basis, salary is commensurate with experience, and the starting date is negotiable. Applicants should send curriculum vitae, a summary of research plans, and the names of at least three references to: **Stephen Zimmer, Ph.D., Department of Medical Microbiology and Immunology, University of Kentucky College of Medicine, 800 Rose Street, Lexington, Kentucky 40536-0084.** The University of Kentucky is an Equal Opportunity Employer, M/F.

### DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY BOWMAN GRAY SCHOOL OF MEDICINE MOLECULAR IMMUNOLOGIST

The Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, invites applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**. The department is currently expanding its faculty with research interests in the general area of molecular immunology. Qualified candidates must have at least 2 years of postdoctoral training in immunology and molecular biology and research interests in areas such as lymphokines, immunoglobulins, immunoparasitology, tumor immunology, or membrane receptors (for example, surface structures involved in T and B cell activation). Applicants should submit curriculum vitae, a statement on the direction of their future research, and the names of three references to: **Dr. Steven B. Mizel, Chairman, Department of Microbiology and Immunology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, N.C. 27103.** The last date for receipt of applications is 15 October 1985. Wake Forest University is an Equal Opportunity/Affirmative Action Employer.

The Laboratory of Experimental Oncology, Department of Pathobiology, College of Veterinary Medicine, University of Tennessee, Knoxville, is inviting applications for a **POSTDOCTORAL POSITION** for research on metabolism of chemical carcinogens in human and animal cells in vitro. Experience in basic in vitro techniques and biochemistry/pharmacology of enzyme-mediated xenobiotic metabolism required. Stipend: \$18,000 per annum. Send curriculum vitae and two letters of reference to: **Dr. H. M. Schuller, Department of Pathobiology, College of Veterinary Medicine, P.O. Box 1071, Knoxville, Tennessee 37901-1071.**

The University of Tennessee Institute of Agriculture is an Equal Opportunity/Affirmative Action/Title XI/Section 504 Employer.

## POSITIONS OPEN

**Ph.D. IN PHYSIOLOGY OR PHARMACOLOGY** with experience in smooth muscle physiology and pharmacology to work in laboratory investigating gastrointestinal motility. This is a position in the Division of Gastroenterology at Winthrop-University Hospital, a major teaching affiliate of Stony Brook.

Please send curriculum vitae and names of two references to:

**Robert Burakoff**  
Chief, Gastroenterology Division  
Winthrop-University Hospital  
259 First Street  
Mineola, Long Island, N.Y. 11501

### PLANT MOLECULAR BIOLOGIST

The Department of Biology at the Virginia Polytechnic Institute and State University announces a tenure-track faculty position at the assistant or associate professor rank. The position could start anytime between January and September 1986. Candidates must have a demonstrated competence in the general areas of plant molecular biology and recombinant DNA technology. Postdoctoral training is highly desirable. The successful candidate will be expected to establish an active research program and participate in the graduate and undergraduate teaching programs of the department. Applicants should submit curriculum vitae, a two- or three-page statement of research interests, and the names of three references to: **Dr. A. Esen, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061.** Application deadline is 15 October or until the position is filled. An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

### PLANT MOLECULAR GENETICIST

A tenure-track assistant professorship for a plant molecular geneticist is available in the Biochemistry Department, University of Maine at Orono. The person selected will share newly constructed research facilities with a multidisciplinary group of biochemists, molecular biologists, cell biologists, and geneticists working with a variety of plant, animal, and prokaryotic systems; will be expected to develop an independent research program; and will participate in graduate and undergraduate teaching obligations of the Biochemistry Department and of the Cellular and Molecular Biology Program. Any research area within plant molecular genetics will be considered. Apply with curriculum vitae, reference letters, and a detailed description of the proposed research program to: **Dr. Robert Roxby, Biochemistry Department Chairman, University of Maine, Orono, Maine 04469.**

**TWO POSTDOCTORAL POSITIONS.** Acidophilic sulfur bacteria are important in bioleaching and biodesulfurization (*Scientific American*, August 1982, page 44). The postdoctorates will participate in ongoing research on molecular biology and physiology of sulfur oxidation and acidophilism, the two crucial attributes in these processes. Training in molecular cloning is required. Salary \$16,500 per year and benefits. Send curriculum vitae and two references to: **Dr. A. Matin, Department of Microbiology, Sherman-Fairchild Science Building, Stanford University, Stanford, Calif. 94305.**

A **POSTDOCTORAL POSITION** is available for a suitable, qualified applicant interested in studying the role of viral oncogene expression in leukemogenesis. Applicants should have experience in molecular biology and an interest in immunobiology. The research program of the Trudeau Institute emphasizes the use of animal models of cancer and infectious disease to analyze mechanisms of protective immunity. The starting salary in 1985 is \$16,000 plus a liberal fringe benefit package. Subsidized housing is available.

The Trudeau Institute is a not-for-profit, pure research institute located on the shore of Saranac Lake, 10 miles from Lake Placid, N.Y. Send résumé and names of three references to:

**David Hines, Ph.D.**  
Trudeau Institute  
P.O. Box 59  
Saranac Lake, N.Y. 12983

An Equal Opportunity Employer

## POSITIONS OPEN

**TWO POSTDOCTORALS AT THE DALTON RESEARCH CENTER** for basic research on mechanisms of toxicity of oxygen radicals and redox-cycling compounds including adriamycin and paraquat are open in 1986. Candidates should have experience/interest in oxygen radicals and training in biochemistry/microbiology/toxicology. There is an opportunity to collaborate with a Center Cardiovascular Program by investigating the role of oxygen radicals in ischemic heart disease. Address curriculum vitae and two letters of reference to: **Olen R. Brown, Ph.D., Dalton Research Center, University of Missouri, Columbia, Mo. 65211.**

**TWO POSTDOCTORAL FELLOWS/RESEARCH ASSOCIATES POSITIONS** available in CDNA and genetic cloning, DNA sequencing, recombinant DNA protein interactions applied to regulation of transcription and in RNA translation. Candidates should have Ph.D. degree and experience in genetic engineering, proteins, and nucleic acid biochemistry. Stipend from \$21,000, depending upon experience. Application, including curriculum vitae, one letter of reference, and names of two additional references, should be sent to: **Elizabeth Beattie, Department of Medicine, New York Medical College, Valhalla, N.Y. 10595.**

**POSTDOCTORAL FELLOWSHIPS IN COLLOIDAL HYDRODYNAMICS**—Positions are available for Ph.D.'s in physical chemistry, chemical engineering, biophysics, or related fields to conduct studies on the flow and stability of colloidal suspensions, emulsions, biological systems, and so forth, using cine-microscopy and a variety of optical methods. Please send curriculum vitae and two letters of reference to: **Dr. T. G. M. van de Ven, Department of Chemistry, McGill University, Pulp and Paper Building, 3420 University Street, Montreal, Quebec, Canada H3A 2A7.**

**POSITION AS POSTDOCTORAL IMMUNOLOGY FELLOW**, Ph.D. or M.D., Division of Rheumatology/Immunology, University of New Mexico School of Medicine, Albuquerque, N.M. 87131, is seeking individuals interested in autoimmunity, basic immunologic control mechanisms, NK cell, or cell-mediated immunity as applied to the rheumatic diseases. Available immediately. U.S. citizens or permanent U.S. residents. Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL MICROBIOLOGIST/BIOCHEMIST.** Position available immediately to study the activity and stability of enzymes and microorganisms immobilized on porous glass. Must have the ability to interact successfully with other life scientists, chemists, and chemical engineers at a large interdisciplinary laboratory. Send résumé and letters of recommendation to: **Dr. Norman Jansen, Fermentation and Enzyme Technology Group, Laboratory of Renewable Resources Engineering, Purdue University, West Lafayette, Ind. 47907.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION IN BIOCHEMISTRY** is available to work on a NIH grant concerned with relationship between Diabetes and Pancreas Center and with interaction between the endocrine and the exocrine pancreas. Submit curriculum vitae and three references to: **Parviz M. Pour, M.D., Eppley Cancer Institute, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Neb. 68105.**

**POSTDOCTORAL POSITION** now available for studies on neuroendocrine regulation of prolactin secretion. Present focus on rapid release of neuropeptides and neurotransmitters from median eminence synaptosomes. Position supported by NIH Training Grant. Send curriculum vitae and names of three references to: **Dr. Michael Selmánoff, Department of Physiology, University of Maryland, School of Medicine, 660 West Redwood Street, Baltimore, Md. 21201.**

**POSTDOCTORAL POSITION** is available for 1 to 3 years (\$18,000) for study of basal ganglia-thalamus neurophysiology and neuropharmacology. Candidate should be experienced in using single unit/intracellular recording and microiontophoresis techniques. Knowledge of 2DG image analysis or micro/mini computer skills is desirable.

Send résumé and copies of representative published papers to:

**Dr. Mario Dalsass**  
Neurology Service (127)  
VA Medical Center  
East Orange, N.J. 07019  
An Equal Opportunity Employer



## PHARMACOLOGISTS Drug Discovery

Growth at Stuart Pharmaceuticals, the U.S. subsidiary of a world leader in pharmaceutical Research and Development, has created the following opportunities at our modern laboratories located 25 miles south of Philadelphia.

—PhD in Renal Biochemistry or Pharmacology with knowledge of the mechanisms of electrolyte and solute transport in blood cells and renal tissues. Work in the discovery of novel diuretic/anti-hypertensive agents. A demonstrated competence in enzymatic and radio-isotope assay techniques would be a decided plus.

—PhD in Neuropharmacology and/or Neuroscience to supervise work in our Central Nervous System (CNS) program on the discovery of drugs to treat cognitive disorders. Must possess a particular strength in behavioral pharmacology. 2–5 years' experience in cognitive performance research is highly desirable.

In addition to a competitive salary and comprehensive benefits package, you'll participate in our unique investment plan. Please submit your CV in confidence. Principals only

C.T. Brodigan,  
Associate Employment Manager



**STUART PHARMACEUTICALS**

Division of ICI Americas Inc.  
Wilmington, DE 19897

An Equal Opportunity Employer m/f

## Senior Research Associate/Scientist

Genentech, Inc., a leader in the field of biotechnology, located on the San Francisco Peninsula, has an exceptional opportunity for a Senior Research Associate/Scientist in our Protein Biochemistry Department. Areas of expertise include mechanism of action of peptide hormones, particularly of the immune system, isolation and characterizations of proteins from natural sources. Expertise in the area of cell culture is also desirable.

Qualified candidates will have a Masters degree in Biochemistry/Biology, combined with a min. 3-5 yrs. relevant experience or a recent PhD and a min. 2 yrs. post-doctoral experience.

We offer an outstanding benefits and compensation package combined with the opportunity to make a significant contribution to our organization. For consideration, please forward resume, in confidence, to Human Resources Dept. LF, Genentech, Inc., 460 Pt. San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

Genentech, Inc.  
Genentech, Inc.  
Genentech, Inc.  
**Genentech, Inc.**  
Genentech, Inc.

## POSTDOCTORAL POSITIONS

Travenol Laboratories, Inc., a progressive leader in the health care industry, is offering unique opportunities for postdoctoral individuals to join our Corporate Research Center.

Applicants must have either a Ph.D., M.D. or D.V.M. One to three year postdoctoral positions are available in the following areas:

- **Biochemistry/Immunology.** Research on basic mechanisms of acute inflammatory injury. The successful candidate will be expected to interface with a multi-disciplinary research team. Strong analytical skills are required.
- **Respiratory Physiology.** Opportunity for research in the areas of pulmonary oxidant injury, functional properties of modified hemoglobin solutions, and acute respiratory therapies. Experience with large animals is desirable.

Publications will be strongly Encouraged.

Travenol provides an excellent salary.  
For consideration, send your resume to:



**Human Resources Department**  
**Travenol Laboratories, Inc.**  
Dept. EW  
P.O. Box 490  
Rt. 120 and Wilson Rd.  
Round Lake, IL 60073

Equal Opportunity Employer

## THE FIRST WORD IN... NEW SCIENTIFIC DISCOVERY

Abbott Laboratories is actively pursuing new technological applications and products in our rapidly growing agricultural operations. As a \$3.1 billion leader in health-care products and services, we are providing the commitment for scientific innovation.

## MANAGER, AGRICULTURAL TECHNOLOGY ASSESSMENT

This position involves the identification, analysis, and evaluation of new approaches to crop protection and disease vector control. The Technology Assessment Manager must develop scientific contacts in universities and research laboratories, monitor the scientific literature, and evaluate the resulting leads from a commercial perspective. Candidates should have a Ph.D. in Microbiology, Agricultural Sciences or Biological Sciences, familiarity with genetic engineering, and significant exposure to industrial research and development. Experience in agriculture is also desirable.

Headquartered in a suburban lakeshore community 30 miles north of Chicago, Abbott provides excellent salaries and full benefits including profit sharing and a stock purchase plan. For prompt consideration, forward your resume with salary history to: **A. Vance Jefferson/Corporate Placement.** Abbott is an Affirmative Action Employer.



"HEALTH CARE WORLDWIDE"

THE FIRST WORD IN...SUCCESS

## POSITIONS OPEN

**A POSTDOCTORAL POSITION IN NEUROIMMUNOLOGY** is available January 1986 to study lymphocyte interactions involved in pathology and regulation of autoimmune encephalomyelitis. Applicant should have experience in cellular immunology. Stipend: \$20,000 to \$25,000, depending upon experience.

Please send curriculum vitae and names of three references to: **Dr. Robert H. Swanborg, Department of Immunology and Microbiology, Wayne State University School of Medicine, Detroit, Michigan 48201.** *An Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

Postdoctoral position available for the study of pulmonary gas exchange or lung mechanics. Applicant should have Ph.D. in physiology or biomedical engineering. Please call or send curriculum vitae with names of three references to: **Dr. Wayne Mitzner, Division of Environmental Physiology, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Maryland 21205.** Telephone: 301-955-3612.

**POSTDOCTORAL POSITION** available immediately in the Arizona Research Laboratories at the University of Arizona for theoretical studies on the rheology of blood flow in microvessels and red blood cell mechanics. The person appointed will join a group of mathematicians, engineers, and physiologists engaged in interdisciplinary research on the microcirculation. A strong background in mathematics is required, with research experience in theoretical fluid mechanics and/or solid mechanics. Experience in mathematical modeling of physiological flows helpful but not essential. Send curriculum vitae and names of three references before 1 October 1985 to: **Dr. T. W. Secomb, Department of Physiology, University of Arizona, Tucson, Ariz. 85724.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION IN MOLECULAR PARASITOLOGY** is immediately available for ongoing research in the molecular basis of antigenic variation and control of gene expression in African trypanosomes. Experience with recombinant DNA technology desirable but not required. Send curriculum vitae and three letters of recommendation to: **Dr. Kenneth Stuart, Issaquah Health Research Institute (near Seattle), 1595 Northwest Gilman Boulevard, Issaquah, Wash. 98027.**

**POSTDOCTORAL POSITION, WILLS EYE HOSPITAL, PHILADELPHIA.** Fully-funded postdoctoral position available immediately in cancer biology and molecular genetics within Research Division. Research projects include application of molecular genetics to retinal disease. For information, please contact: **Jay L. Federman, M.D., Director of Research, Wills Eye Hospital, 9th and Walnut Streets, Philadelphia, Pa. 19107.**

**POSTDOCTORAL POSITION** available to clone and study the expression of the fumarase gene in *Euglena*. Studies will involve using immunological and recombinant DNA techniques to follow the induction of fumarase by light and ethanol in order to determine whether enzyme levels are controlled at the transcriptional or translational level. Applicant having experience with or desire to learn immunology and recombinant DNA techniques should submit curriculum vitae and three letters of recommendation to: **Dr. Steven Schwartzbach, 303 Lyman Hall, University of Nebraska—Lincoln, Lincoln, Nebraska 68588-0118.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately in suburban Chicago, medical center for studies on dopaminergic neurotoxicity of beta-carboline analogs of MPTP and their relationship to parkinsonism. Experience in HPLC, neuroanatomical techniques, and medicinal chemistry desired. Send curriculum vitae and three references to: **Dr. M. A. Collins, Department of Biochemistry, Loyola University School of Medicine, 2160 South First Avenue, Maywood, Ill. 60153.** Telephone: 312-531-3376. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** Molecular and genetic characterization of new retroviral onc genes. Ph.D., M.D., or D.V.M. with research experience in molecular biology. Send résumé including three references to: **Dr. Peter K. Vogt, Department of Microbiology, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles, Calif. 90033.** *The University of Southern California is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available as of 1 September in clinical immunology program studying the biochemistry of coagulation factors and their role in inflammation. Candidates should have a Ph.D. degree in biochemistry (proteins), immunopathology, or related disciplines. Send curriculum vitae and names of three references to: **Dr. Allen P. Kaplan, Head, Division of Allergy, Rheumatology and Clinical Immunology, State University of New York (SUNY), Stony Brook, Health Sciences Center, Stony Brook, N.Y. 11794.** *SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer.* AK Number 188-85.

**POSTDOCTORAL POSITION IN FISH NUTRITION.** Position available 1 September 1985, to participate in an ongoing research program in fish nutrition and biochemistry. Candidates should have a Ph.D. in nutritional or comparative biochemistry. Preference will be given to applicants with laboratory experience with fish. Starting salary is \$18,000 for 12 months. Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. R. P. Wilson, Department of Biochemistry, Mississippi State University (MSU), Post Office Drawer 88, Mississippi State, Miss. 39762.** *MSU is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study the cell biology and biochemistry of the mammalian heat shock (stress) response. Studies in progress include: mechanism of stress protein induction; isolation, characterization, structure, and function of stress proteins; isolation and characterization of RNP's containing stress proteins and determination of in vivo function; molecular basis of acquired thermotolerance; hyperthermosensitivity of transformed cells. Send curriculum vitae and list of three references to: **Dr. William J. Welch, Cold Spring Harbor Laboratory, P.O. Box 100, Cold Spring Harbor, N.Y. 11724.**

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available to study RNA processing in animal cells and viruses. Background either in biochemistry, microbiology, or molecular biology needed. Experience in recombinant DNA technology desirable. Salary negotiable. Send résumé with two names for references to: **Dr. Mary Edmonds, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, Pa. 15260.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL/RESEARCH ASSOCIATE POSITION** available immediately to study cytoskeletal proteins of mammalian neural tissue. Background in protein chemistry, membrane biochemistry, immunology, and/or electron microscopy is desirable. Please send curriculum vitae and two references to: **Dr. Ian S. Zagon, Department of Anatomy, The M.S. Hershey Medical Center of The Pennsylvania State University, Hershey, Pa. 17033.**

### POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS

**Drs. S. Steven Potter or Craig H. Duncan:** Positions available immediately in molecular genetics to investigate mammalian genomic organization and transposable elements using transgenic mice and recombinant DNA techniques. Background with DNA work or mouse genetics preferred.

**Dr. James L. Lessard:** (i) Analysis of the developmental expression of muscle isoactins using monoclonal antibodies and in situ hybridization. Background in immunocytochemistry and/or molecular genetics. (ii) Immunochemical analysis of actin structure/function. Experience in peptide synthesis and/or immunochemistry preferred.

**Dr. Roger E. Ganschow:** Structural and functional characterization of DNA sequences which regulate the expression of glucuronidase in inbred mice, utilizing a variety of recombinant DNA techniques including transgenic mice.

**Dr. Jay Degen:** Regulation of the plasminogen activator gene. Utilizes recombinant DNA technology to study enzyme induction in mammalian cell culture.

**Dr. Sandra Degen:** Molecular structure of the genes and proteins involved in human blood coagulation. Use of recombinant DNA techniques to study the structure and function of domains of complex proteins.

Send curriculum vitae and names of three references to the appropriate professor at: **Children's Hospital Research Foundation, IDR—Room 729, Eland and Bethesda Avenues, Cincinnati, Ohio 45229.**

*An Equal Opportunity Employer*

## POSITIONS OPEN

### POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS—BIOTECHNOLOGY PROGRAM EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Two positions are available immediately in the area of prokaryotic/eukaryotic molecular genetics. Active research areas include: DNA structure and gene regulation in prokaryotes, gene construction, viral vaccine development, and eukaryotic mechanisms of gene regulation and recombination. Send letter of application, résumé, and names of three references to:

**Dr. Uwe R. Müller**  
Department of Microbiology  
East Carolina University School of Medicine  
Greenville, N.C. 27834-4354

*Affirmative Action/Equal Opportunity Employer*

**POSTDOCTORAL RESEARCH ASSOCIATE IN DEVELOPMENTAL BIOLOGY**—Position available for electrophysiological studies on limb development in amphibian and avian embryos. Research will include the use of extracellular vibrating probe to measure and characterize endogenous electrical currents associated with limb formation, and ultrastructural studies of the anatomical basis of these currents. This person will be encouraged to develop and explore his or her own ideas on these problems and to participate in the broader scientific life of the university. Contact: **Kenneth R. Robinson, Department of Biological Sciences or Richard B. Borgens, Department of Anatomy, SCVM, Purdue University, West Lafayette, Indiana 47907.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** available fall 1985 to study enzymatic glycosylation of exogenous secondary metabolites in plants. Isolation, purification, and characterization of an induced glucosyltransferase. Ph.D. in biochemistry or plant physiology required; experience in enzymology and immunology desirable. Send curriculum vitae and names of three references to: **Dr. Nelson E. Balke, Department of Agronomy, 259 Moore Hall, University of Wisconsin, Madison, Wis. 53706.**

**POSTDOCTORAL OR RESEARCH ASSOCIATE POSITION** available starting 1 September 1985 in an established laboratory conducting research on herpesvirus glycoproteins. Background in molecular biology, virology, and membrane biochemistry is desirable. Salary will be competitive and commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Richard J. Courtney, Department of Biochemistry and Molecular Biology, Louisiana State University School of Medicine, 1501 Kings Highway, Shreveport, La. 71130.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH OPPORTUNITIES.** Postdoctoral openings are available in the following areas: (i) Development and applications of ultra-high (0.01 Hz) resolution carbon-13 NMR; (ii) NMR studies of glycoproteins, glycopeptides, oligosaccharides, and polysaccharides; and (iii) NMR studies of nonezymatic "in vivo" reactions pertinent to diabetes and aging. Send curriculum vitae and names of at least three references to: **Professor Adam Allerhand, Department of Chemistry, Indiana University, Bloomington, Ind. 47405.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

**POSTGRADUATE RESEARCH ZOOLOGIST** position available 1 January 1986 for 1 year with possible extension. Ph.D. with experience in muscle cell culture and in biochemistry of growth factors, including isolation and purification of growth factors on various columns, assay of growth factor, supervision of peptide mapping and amino acid analysis of growth factors and of amino acid sequencing of growth factors, preparation of monoclonal antibodies to growth factors. Identification of inhibitors present in muscle tissue. Salary (\$19,200 to \$23,900) commensurate with experience. Send curriculum vitae to: **Dr. Richard Strohman, Zoology Department, University of California, Berkeley, Calif. 94720,** by 1 October. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSOCIATE** to work in both x-ray crystallography and oligonucleotide synthesis using the triester method. Applicant must have a Ph.D. in chemistry and have several years of experience in the above areas. Applicant should contact: **Dr. Henry M. Sobell, Department of Radiation Biology and Biophysics, University of Rochester School of Medicine and Dentistry, Rochester, New York 14642,** directly, before 20 September 1985. *The University of Rochester is an Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH POSITION** available immediately for a minimum of 3 years to study cell surface phenotype, DNA content, and kinetic properties of lymphoma cells using the flow cytometer as the main analytical instrument. Independent research in related areas such as lymphoma growth regulation and differentiation, and anti-idiotypic antibody production will be encouraged. At least 2 years of experience in cell biology and/or cellular immunology is required. Stipend commensurate with experience. Please send curriculum vitae and names of references to: **Raul C. Braylan, M.D., Professor, Department of Pathology, Box J-275, JHMC College of Medicine, University of Florida, Gainesville, Florida 32610.**

### POSTDOCTORAL RESEARCH POSITION

Available immediately, in a basic science, neuroanatomy research laboratory to study the development of the avian vestibular system. Research focuses on the morphology of the developing inner ear and vestibular nuclei using transmission electron microscopy and/or classical neuroanatomical methods (rapid golgi) and experimental manipulations. Strong background in neurobiology desirable. Competitive salary. Commitment required for at least 2 years.

Please send résumé and three references to: **Dr. K. Peusner, Department of Anatomy, George Washington University School of Medicine, 2300 Eye Street, NW, Washington, D.C. 20037. Equal Opportunity Employer.**

### RESEARCH PSYCHOLOGIST

The Department of Electrophysiology has a position immediately available for a Ph.D. to conduct clinical and research studies using all modalities of evoked potentials including P300 and color topographic brain mapping. Computer programming skills essential. Annual salary range: \$25,883.76 to \$40,699.82, dependent upon qualifications and experience. Send curriculum vitae and references to: **Dr. Bill Finley, Children's Medical Center, P.O. Box 35648, Tulsa, Oklahoma 74153. Telephone: 918-664-6600, extension 379. Equal Opportunity Employer.**

## POSITIONS OPEN

The University of Tennessee Center for the Health Sciences (UTCHS) announces the establishment of an endowed **PROFESSORSHIP** in its College of Pharmacy—The Harriet S. Van Vleet Professorship. Senior and accomplished scientists, with extramurally funded research programs in the pharmaceutical or biomedical sciences, are invited to register their candidacy for this professorship. Nominations and applications will be accepted through 30 September 1985. Address correspondence to: **Andrew Lassio, Ph.D., Chairman, Advisory Committee for the Van Vleet Professorship, UTCHS, Memphis, Tennessee, 38163. The University is an Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE.** Position available immediately for "isolation and characterization of the factor(s) involved in protein import into mitochondria and chloroplasts." Ph.D. in biochemistry and minimum of 1 year of postdoctoral experience in receptor-ligand interactions essential. Familiarity with immunoassays desired. Salary: \$20,140 per year. Send résumé to: **The Rockefeller University, Box 292, 1230 York Avenue, New York, N.Y. 10021. An Equal Opportunity Employer.**

Available immediately. **RESEARCH ASSOCIATE** to study the effect of defection plant virus genes on virus replication. Send curriculum vitae and names of three references to:

**Dr. W. G. Dougherty  
Plant Pathology  
Box 7616  
North Carolina State University  
Raleigh, N.C. 27695-7616**

**RESEARCH ASSOCIATE** position available immediately for studies in developmental neuroendocrinology, focusing on the regulation of growth hormone secretion. Applicants should have Master's or, preferably, Ph.D. in a relevant field. Experience including tissue culture, RIA's, small animal work preferred. Send curriculum vitae and names of at least two references to: **Nola M. Jones, Human Resources Department, Michael Reese Medical Center, 31st Street and Lake Shore Drive, Chicago, Illinois 60616. Equal Opportunity Employer, M/F.**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE:** Available 1 October 1985. Synthetic organic/medicinal chemist with HPLC experience and good spectroscopic skills to work on nucleoside analogs as potential antivirals. Beautiful upstate New York location in high-tech area. Starting salary: \$18,000 plus fringe benefits and potential for more than one year appointment. Submit cover letter and curriculum vitae containing names of three references by 15 September 1985 to: **Professor John P. Neenan, Department of Chemistry, Rochester Institute of Technology (RIT), Rochester, N.Y. 14623. Telephone: 716-475-2497. RIT is an Equal Opportunity/Affirmative Action Employer.**

### UNIVERSITY OF VICTORIA VICTORIA, CANADA DEPARTMENT OF BIOLOGY

Applications are invited for the position of **NSERC University Research Fellow and Adjunct Assistant Professor** effective 1 April 1986. The initial appointment is up to 5 years based on satisfactory performance. Candidates are expected to have a Ph.D. with postdoctoral experience in one of the following areas of forestry science (tree physiology, forest pathology, biochemical or population genetics, forest entomology). The successful applicant will be expected to play an active role (teaching and research) in a graduate-level forestry science program, and to contribute from time to time to related undergraduate teaching. The assistant professor salary is \$26,465 (1984-1985 scale). Applicants should submit, not later than 1 October 1985, curriculum vitae, a personal statement of professional goals, and the names of three referees to:

**Dr. J. E. McInerney, Chairman  
Department of Biology  
University of Victoria  
Victoria, British Columbia, Canada V8W 2Y2**

Canadian immigration regulations now require the university to assess applications from Canadian citizens and permanent residents of Canada before assessing applications from other persons. *The University of Victoria offers Equal Employment Opportunities to qualified male and female applicants.*

## Postdoctoral Scientist Investigative Toxicology

The Department of Investigative Toxicology at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist for its in vitro hepatotoxicity laboratory.

Our postdoctoral appointments are of 1 year duration and with mutual agreement renewable for a second.

The successful candidate will:

- develop an animal model for investigating hepatotoxicity induced by non-steroidal anti-inflammatory agents
- take responsibility for the daily routine management of the hepatotoxicity laboratory
- master techniques of hepatocyte isolation and a variety of supportive techniques
- maintain an active publishing record and attendance at national toxicology meetings

Candidates are required to have:

- a PhD in Pharmacology, Toxicology, Biochemistry or a related field
- experience in Isolated Cell Techniques
- experience in Biochemical Analytical Techniques (HPLC, column chromatography, etc)
- excellent oral and written communication skills

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your resume and names of three references to: **Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1594 Spring Garden Street, Phila., PA 19101. We are an equal opportunity employer, M/F/H/V.**

**SK&F**  
A SmithKline Beckman Company

## Senior Investigator Cell Biologist

The Department of Cell Biology at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking an individual to join a multidisciplinary effort investigating the biology, biochemistry and molecular genetics of human colon adenocarcinoma. We are particularly interested in candidates with a strong background in epithelial cell biology and the ability to interact productively with scientists from other disciplines.

The successful candidate will:

- define and develop optimal in vitro conditions for establishing primary cultures of colon epithelial cells.
- investigate the genotypic and phenotypic stability of colon epithelial cultures maintained in vitro.
- examine the role of growth factors (GI peptides), components of the extracellular matrix, lymphokines (eg, TNF) and neurotransmitters in regulating colon epithelial proliferation, differentiation and polarity.
- participate in collaborative efforts studying:
  - the immortalization of colon epithelial cells by genetic manipulation
  - the role of oncogenes in the pathogenesis of colon carcinoma,
  - the autocrine control of colon epithelial cell growth,

The candidate should have:

- a Ph.D in cell biology.
- 2-5 years postdoctoral experience.
- expertise in epithelial cell biology.
- experience in manipulating primary epithelial cultures.
- an excellent publication record.
- good communication skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your resume and names of three references to: **Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1564 Spring Garden Street, Phila., PA 19101. We are an equal opportunity employer, M/F/H/V.**

**SK&F**  
A SmithKline Beckman Company

## POSITIONS OPEN

### DEPARTMENT OF NUTRITIONAL SCIENCES POSITION AVAILABLE

**POSTDOCTORAL RESEARCH BIOCHEMIST** (two positions available) to study the regulation of folate and one carbon mechanism. Projects include the cloning, expression, and site specific mutagenesis of mammalian and bacterial genes for folate enzymes, studies on the mechanism of catalysis and substrate binding sites of folypolyglutamate synthetase, and studies on the expression of cloned genes and the regulation of folate homeostasis in cultured mammalian cells. Ph.D. degree or equivalent in biochemistry or related field, and experience in recombinant DNA, protein chemistry, enzymology, and/or tissue culture techniques advantageous. Salary: \$19,212 to \$23,940 per year, depending on qualifications. Starting date: 1 September 1985. (Initial appointment for 12 months; reappointment subject to availability of extramural funds). Application deadline: 23 September 1985. Send curriculum vitae and name/address of three references to: **Dr. Barry Shane, Department of Nutritional Sciences, University of California, 119 Morgan Hall, Berkeley, Calif. 94720; telephone: 415-642-0750.**

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

**RESEARCH NEUROBIOLOGIST.** Conduct extra-cellular recording of action potentials from single visual neurons in cats; analyze collected data using linear/nonlinear system modeling to arrive at a detailed mathematical model of serial filtering in space and time by retinal ganglion cells and neurons of dorsal lateral geniculate nucleus in response to arbitrary patterns of light and dark. Equipment used: PDP 11/34A computer; TV display; microelectrodes; amplifiers; micromanipulators; plotters; laboratory interface, and equipment to measure animal's EEG, heart rate, blood pressure, and CO<sub>2</sub>. Minimum requirements: Ph.D. in one of the following: neurophysiology, experimental psychology, biomedical engineering, or biophysics. Two years of experience in the job offered. Forty hours a week, Monday through Friday, 9 a.m. to 5 p.m., \$26,750 annual salary (12 months). Send résumés to: **ILLINOIS JOB SERVICE, 910 South Michigan Avenue—Room 333, Chicago, Illinois 60605; Attention: Mrs. S. Chalem, Reference Number 4541-S.** An employer-paid ad. University position. *Equal Opportunity Employer.*

### GS-9/11/12 Civil Service Position STATISTICIAN/EPIDEMIOLOGIST/ COMPUTER PROGRAMMER

The Centers for Disease Control is recruiting for statisticians, epidemiologists, and computer programmers to manage/conduct research in occupational safety including the design, implementation, and analysis of new and ongoing research efforts. Candidates with master's or Ph.D. degrees in the field are preferred. Salary ranges from \$21,804 to \$31,619, based on experience and qualifications. Send résumé and Standard Form 171 to: **Jenny P. Garner, Centers for Disease Control, 1600 Clifton Road, Atlanta, Ga. 30333.** For further information, telephone: 404-236-3613. *An Equal Opportunity Employer.*

### TOXICOLOGIST BUSHY RUN RESEARCH CENTER UCC-CMU

Bushy Run Research Center (BRRC), operated by the Union Carbide Corporation (UCC) and Carnegie-Mellon University (CMU), is seeking an experienced toxicologist with a Ph.D. to act as study director of multigeneration reproduction and developmental toxicology studies. Primary responsibilities include design, implementation, analysis, interpretation, report and manuscript preparation, and technical supervision of studies done in multiple species by all routes of administration. Candidate should have relevant publications and a strong statistics background. Study cost estimating experience and DABT certification are desired.

BRRC is located 25 miles east of Pittsburgh in beautiful rolling countryside. The laboratory has recently undergone renovation and has some of the most modern, state-of-the-art facilities available. BRRC is accredited by AALAS and by the Toxicology Laboratory Accreditation Board. Send résumé and references to: **D. L. Geary, Bushy Run Research Center, R.D. 4, Mellon Road, Export, Pa. 15632.**

*BRRC is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### SENSORY NEUROBIOLOGIST

The Department of Neurobiology and Physiology at Northwestern University is seeking applications for a faculty position, at the level of professor or associate professor in the general area of sensory neurobiology. The successful candidate will have a strong, well established program of research, preferably in developmental or cellular/molecular neurobiology dealing with one of the sensory systems.

The Department of Neurobiology and Physiology has strong, well-funded groups in sensory neurobiology and in neuroendocrinology, both representing multidisciplinary approaches to these areas of neuroscience. The department currently administers a Ph.D. program; two NIH training programs are centered in the department. The department also has an undergraduate major leading to a B.A., and a B.A./M.S. honors program for exceptional undergraduates.

Interested persons should submit curriculum vitae and the names of three persons who can provide references to: **Dr. Albert I. Farbman, Department of Neurobiology and Physiology, Northwestern University, Hogan Hall, Evanston, Ill. 60201.**

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

### SUPERVISORY RESEARCH MEDICAL OFFICER (GM-15)

The Naval Biodynamics Laboratory (NBDL), New Orleans, Louisiana, immediately seeks a physician as Head, Scientific Programs Directorate, and Principal Investigator for Impact Acceleration. NBDL is the Navy's primary laboratory to conduct biomedical research and development in the areas of impact acceleration and motion science. All applicants must be U.S. citizens and possess a medical degree from an accredited institution. In addition, they must possess (i) five years of medical research experience which included one year of demonstrated outstanding leadership in the field of biodynamics and motion science; or (ii) a Ph.D. degree in a field of science directly related to medicine and three years of experience as described in (i) above. Candidates who have published scientific literature on biodynamics and impact injury are preferred. Base salary is \$52,262 per year plus physicians' comparability. Additional information and applications may be obtained by contacting: **Debra Wallace, Department of Navy, Consolidated Civilian Personnel Office, 4400 Dauphine Street, New Orleans, La. 70146-5700; telephone: 504-948-1555.** Applications will be accepted until the position is filled. *The Department of Navy is an Equal Opportunity Employer.*

### VIROLOGIST

Progressive midwestern pharmaceutical company seeks a Ph.D. virologist with four or more years of postdoctoral experience to add to its biological research staff. The successful candidate will have a strong background in molecular and cell biology, including expertise in viral antigen production and purification. A thorough understanding of mammalian cell suspension culture is required, in addition to experience with Elisa techniques, electrophoresis, ultrafiltration and rDNA techniques. The candidate will interact with other professionals in a campus-like atmosphere located in the Kansas City metropolitan area. BAYVET offers a competitive starting salary and comprehensive benefits package. To apply, send résumé including salary history and requirements to:

**BAYVET  
Division of Miles Laboratories Inc.**

**P.O. Box 390  
Shawnee Mission, Kansas, 66201  
An Equal Opportunity Employer, M/F**

### VISION RESEARCH SCIENTIST

The School of Aerospace Medicine is seeking a senior research psychologist (psychophysicist) to study the effects of lasers on vision and visual performance. The candidate must have three years of professional research experience or a Ph.D. in physiological psychology, and a demonstrated history of publication in peer-reviewed journals. Knowledge of physics, optics, and computer modeling of ocular systems is desirable. The position will be filled at the GS-180-12 level, \$31,619 per annum, and is open to all interested U.S. citizens. Applicants must submit SF-171 (personal qualifications statement). Submission of curriculum vitae is desirable. Applications must be received by 30 September 1985 at: **6570 ABG/DPCS, Attention: 85-40, Brooks Air Force Base, Texas 78235.** Direct inquiries to **Ms. Hudson, telephone: 512-536-3353.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH SCIENTIST.** Apply advanced technical skills in fields of (i) immunochemistry, with special knowledge of carbohydrate structure, fine structures of antibodies, and structure of antibody-lectin combining sites; and (ii) molecular biology, to clone fragments of chromosomal DNA containing specific antibody genes and to determine nucleotide sequences of the genes. Minimum of 1 year of experience in job offered or at least 4 years of laboratory research in quantitative immunochemistry combined with skills of molecular biology encompassing recombinant DNA technology and detailed DNA chemistry. Applicant must be non-smoker and possess Ph.D. in carbohydrate and protein chemistry. Forty hours per week; \$18,000 per annum. Columbia University. Send résumé to: **Box 180, SCIENCE.**

## EXCHANGE PROGRAMS

### OPPORTUNITIES FOR STUDY AND RESEARCH IN CHINA

The Committee on Scholarly Communication with the People's Republic of China (CSCPRC) announces opportunities under the 1986-1987 National Program for Advanced Study and Research in the PRC for graduate students and postdoctoral scholars in the social sciences and humanities. This program offers support for long-term study and research at Chinese universities and research institutes. In addition, the **Visiting Scholar Exchange Program** supports short-term scholarly visits for both American and Chinese scholars in the sciences, as well as the social sciences and humanities. *Application is open to citizens and permanent residents of the United States regardless of national origin, sex, or religious affiliation.* The number of grants depends on available funding, which is provided by the U.S. Information Agency, Department of Education, National Endowment for the Humanities, National Science Foundation, and the Starr and Ford Foundations. Address inquiries to: **CSCPRC, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.**

Postmark/mailling deadline for applications: 12 October 1985.

## FELLOWSHIPS

### CARDIOVASCULAR BEHAVIORAL MEDICINE RESEARCH POSTDOCTORAL FELLOWSHIP—

The University of Pittsburgh has two fellowships available immediately and in 1986 in its cardiovascular behavioral medicine research training program for M.D. or Ph.Ds. The program includes four areas of training: (i) Cardiovascular physiology and psychophysiology; (ii) cardiovascular disease and pathophysiology; (iii) principles of behavior and behavioral change; and (iv) research methods and statistics. The program is 1 to 3 years with stipends at current NIH levels of support; stipends can be supplemented according to level of training. Applicants should send a statement of how the postdoctoral fellowship fits into overall career objectives, curriculum vitae, and three letters of reference to: **Karen Matthews, Ph.D., Department of Psychiatry, University of Pittsburgh, 3811 O'Hara Street, Pittsburgh, Pa. 15213, or telephone 412-624-2041.**

## MARKETPLACE

**P02 MEASUREMENTS**

Complete O<sub>2</sub> uptake system

Clark-style miniature O<sub>2</sub> electrode

O<sub>2</sub> Meter  
O<sub>2</sub> Micro-electrodes

Send for catalog.

Diamond Electro-Tech Inc.  
1230 Eisenhower Place  
Ann Arbor, MI 48104  
USA

(313)973-7000  
1-800-262-3654

Circle No. 234 on Readers' Service Card

## MOLECULAR GENETICS

The Center for Molecular Medicine and Immunology is seeking a Director for the newly established Institute for Molecular Genetics. A national leader in the development and application of genetic approaches to cancer research is sought to direct the future program of this research unit, including the recruitment of scientific personnel. Candidates should have a commitment to excellence in research with a history of extramural funding and administrative experience. Special consideration will be given to those individuals with interest in oncogenes and related problems. Adjunct faculty appointment is available. Applications, to include curriculum vitae, bibliography, a statement of career and research goals and the names of three references should be sent to:

**David M. Goldenberg, Sc.D., M.D.**  
President

**CENTER FOR MOLECULAR  
MEDICINE AND IMMUNOLOGY**  
University of Medicine and Dentistry  
of New Jersey  
100 Bergen Street, Newark, NJ 07103

*An Equal Opportunity Employer*



## RESEARCH FELLOW MICROBIOLOGIST

**\$A26,001 – \$A38,243**

### **DIVISION OF TROPICAL ANIMAL SCIENCE DAVIES LABORATORY, TOWNSVILLE QLD**

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7,500 staff, of whom some 2,900 are professional scientists. The Organization's research activities are grouped into five Institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology and Physical Sciences.

**GENERAL:** The CSIRO Division of Tropical Animal Science conducts research on the improvement of animal production, particularly cattle production in tropical Australia and has programs on breeding and management, disease and parasite control and nutrition.

The Townsville group is being established to study nutritional problems of ruminants in tropical Australia and is currently studying the effects of chewing and of neuromuscular activities on digesta propulsion and is measuring quantitatively the extent of microbial fermentation.

**DUTIES:** The appointee will develop lines of independent and collaborative research within the broad nutrition program and, specifically, characterize the microbial populations, bacteria protozoa and fungi involved and work towards manipulating the microbes for the benefit of the animal.

**QUALIFICATIONS:** A PhD degree or equivalent qualifications with demonstrable research ability and a sound knowledge in the field of ruminant microbiology. Experience with continuous flow cultures or chemostats would be an advantage.

**TENURE:** A term of three years, with the possibility of a further term of two years. Australian Government superannuation benefits available.

**APPLICATIONS:** Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference No A5984, should be directed to: **The Chief, CSIRO Division of Tropical Animal Science, Long Pocket Laboratories, Private Bag No 3, INDOOROOPILLY QLD 4068, AUSTRALIA** by 4 weeks from date of publication.

*CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER*

## STATE OF KUWAIT

### **Department of Zoology College of Science Kuwait University**

Applications are invited for the posts of Lecturers (Assistant Professors), Assistant Professors (Associate Professors) and Professors (Full Professors) in the Department of Zoology, College of Science for the second semester of the academic year 1985/86 tenable February 1, 1986, in accordance with the following:

- 1) Applicants must hold the Ph.D. or its equivalent in *genetics* from a recognized university.
- 2) No applications will be considered except those holding the Ph.D. in genetics at the time of application. English is the language of instruction in the College of Science.

Application forms and conditions of service may be obtained from:

**Kuwait University Office**  
**3500 International Dr. N.W.**  
**Washington, D.C. 20008**

Completed applications, together with non-returnable copies of academic qualifications, sample publications, and letters of reference should be sent by registered post directly to:

**Department of Administrative Affairs**  
**Kuwait University**  
**P.O. Box 5969**  
**Safat**  
**KUWAIT**



# Reichert

Our "new" company name is well known in research labs throughout the world.

You have known our products by the names "American Optical" or "AO Scientific Instruments." Now we call ourselves "Reichert," the name that was long associated with our most sophisticated research microscopes.

Today we put our Reichert name on all our products... as a pledge of our commitment to maintain the level of excellence that you have come to expect.

**This POLYVAR widefield photomicroscope**, for example, offers ■ Extremely high optical quality ■ Consistent widefield image in both tube and camera ■ Robust mechanical design, and a ■ Fully universal photographic system.

These assets combine to put the Reichert POLYVAR in the highest category for quality.

In microscopes, microtomes, fiber optics, ophthalmic instruments, histopathology products, and analytical instruments, look to us for Reichert quality!

We've Changed  
Our Name From  
AO to Reichert

**Reichert**<sup>®</sup>

Reichert Scientific Instruments

Warner-Lambert Technologies, Inc.  
Box 123, Buffalo, N.Y. 14240-0123

Circle No. 176 on Readers' Service Card