

thinking on a subject or explore some of the nuances of the field. For instance, a review by F. C. Gillett updates results on the Vega phenomenon, discovered by IRAS, for four nearby stars. This phenomenon is an infrared excess attributed to thermal emission by orbiting circumstellar grains that can be interpreted in some cases as indirect evidence for planet formation around other stars. A review by H. J. Habing demonstrates that by careful selection of infrared colors and source brightness we can explore the distribution of stars in our galaxy. Because interstellar extinction has little effect on infrared wavelengths (compared to the visible), IRAS has provided us with an unprecedented view of the Milky Way, revealing for the first time the nuclear bulge and stellar disk of our galaxy.

Other noteworthy contributions include a thought-provoking review by B. G. Elmegreen, who discusses how infrared observations can be used to deduce information on the luminosities of newly forming stars (protostars) and star clusters and the distribution of dust particles around young stars. Elmegreen outlines how our current theories of star formation can be modified by these results, indicating the important role dust can play on the magnetic diffusion rate in dense molecular clouds, an effect that will influence the masses of the stars that form. The three reviews on the composition and properties of interstellar grains by H. C. van de Hulst, J. S. Mathis, and J. M. Greenberg, leaders in the field, are clear and illuminating. These are just some of over 20 invited reviews and over 80 contributed papers contained in this volume.

TERRY HERTER  
*Department of Astronomy,  
Cornell University,  
Ithaca, NY 14853-6801*

## Fossils in Phylogeny

**Phylogeny Reconstruction in Paleontology.** ROBERT M. SCHOCH. Van Nostrand Reinhold, New York, 1986. xii, 353 pp., illus. \$52.95.

The revolution in taxonomic practice brought about by cladistics in the last two decades not only has brought method and rigor into the field of systematics but has also led some to question or reject the traditional role of paleontology in phylogenetic reconstruction. A clear exposition of where paleontology stands in phylogenetic reconstruction is therefore long overdue. Unfortunately, this book is not about what role fossils play in phylogenetic reconstruction but about concepts and methods of analysis that can be applied to fossil data.

Schoch defines phylogeny in an unusually restricted manner to mean the establishment of relationships (taxonomy) and specifically excludes the construction of phylogenetic trees, which he calls "evolutionary phylogeny." Yet this book is about much more than "phylogeny" in Schoch's terms. Of the three sorts of data retrievable from fossils—morphological characteristics, stratigraphical range, and geographical distribution—it is morphology and morphology alone that provides the information on which phylogenetic relationships have to be decided. Only after relationships have been established by the most rigorous method possible can stratigraphical and geographical data be analyzed in a meaningful way to produce phylogenetic trees or biogeographical histories of vicariance. So, although rigor in both stratigraphical and biogeographical analysis is to be applauded, the two chapters dealing with these themes seem largely irrelevant to Schoch's main thesis. Even further removed from phylogenetic reconstruction is the final chapter on macroevolution, since macroevolution theories attempt to explain the patterns of diversity that result from combining stratigraphical and geographical data with hypotheses of relationship. Furthermore, it appears to me that there is insufficient resolution in paleontological data to be able to distinguish unambiguously between any of the competing hypotheses.

I found little to criticize in Schoch's clear analysis of the vast amount of literature that phylogenetic reconstruction has prompted recently but was somewhat disappointed not to find a more paleontological slant or any concrete examples in the text. Fossils provide the only unambiguous guide to past life and their character associations, and the character transformations deduced from paleontological lineages are no more susceptible to problems of interpretation than are ontogenetic character transformations in determining homology and character polarity. It is a shame, for example, that only the briefest mention of Hennig's stem and crown group concept is given, since this seems to me to be one of the most fruitful approaches to the placement of fossils. The plesion concept gets rather more of an airing before being rejected as unnecessary (though for my group, echinoderms, trying to fit all living and fossil forms into a unified taxonomy without plesions would produce the most incredibly unwieldy hierarchy).

Finally, although Schoch is to be commended for trying to provide a guide to the extensive literature covering the theory behind phylogenetic analysis that has appeared over the last 10 to 15 years, I fear that because of all the jargon used only those fully conversant with current arguments will

find this book digestible. There is a glossary, but it is certainly not comprehensive, and the two words that sent me scurrying to it were not included. For anybody starting out in phylogenetic analysis, considerable background reading is required before tackling this book.

ANDREW B. SMITH  
*Department of Palaeontology,  
British Museum (Natural History),  
London SW7 5BD, United Kingdom*

## Books Received

**Bioproducts.** R. Claus *et al.*, A. Giechter, Ed. Springer-Verlag, New York, 1986. viii, 179 pp., illus. \$57. Advances in Biochemical Engineering/Biotechnology, 33.

**Bryozoa.** Ordovician to Recent. Claus Nielsen and Gilbert P. Larwood, Eds. Olsen and Olsen, Fredensborg, Denmark, 1985. viii, 364 pp., illus. Paper, \$85. From a conference, Vienna, July 1983.

**The Butterflies of North America.** A Natural History and Field Guide. James A. Scott. Stanford University Press, Stanford, CA, 1986. xvi, 583 pp., illus., + plates. \$49.50.

**Cancer.** The Misguided Cell. David M. Prescott and Abraham S. Flexer. 2nd ed. Sinauer, Sunderland, MA, 1986. xvi, 349 pp., illus. Paper, \$18.95.

**Cancer in Atomic Bomb Survivors.** Itsuzo Shigematsu and Abraham Kagan, Eds. Japan Scientific Societies Press, Tokyo, and Plenum, New York, 1986. viii, 196 pp., illus. \$55. GANN Monograph on Cancer Research no. 32.

**Carbohydrate Metabolism in Cultured Cells.** Michael J. Morgan, Ed. Plenum, New York, 1986. xxii, 514 pp., illus. \$69.50.

**Endocrine Regulation of Electrolyte Balance.** R. Krück and K. Thurnau, Eds. Springer-Verlag, New York, 1986. xii, 150 pp., illus. Paper, \$49.50. From a symposium.

**Handbook of Glass Properties.** Narottam P. Bansal and R. H. Doremus. Academic Press, Orlando, FL, 1986. x, 680 pp., illus. \$135.

**Handbook of Infrared Standards.** With Spectral Maps and Transition Assignments between 3 and 2600  $\mu\text{m}$ . Guy Guelachvili and K. Narahari Rao. Academic Press, Orlando, FL, 1986. lxxii, 851 pp., illus. \$75.

**Handbook of Nature Study.** Anna Botsford Comstock. Comstock (Cornell University Press), Ithaca, NY, 1986. xxiv, 887 pp., illus. \$49.50; paper, \$19.50. Augmented reprint, 1939 ed.

**Handbook of Nonprescription Drugs.** 8th ed. American Pharmaceutical Association, Washington, DC, 1986. xxvi 741 pp., illus. \$60; to members, \$46.

**Handbook of Pattern Recognition and Image Processing.** Tzay Y. Young and King-Sun Fu, Eds. Academic Press, Orlando, FL, 1986. xx, 705 pp., illus. \$89. Handbooks in Science and Technology.

**The Making of a Continent.** Ron Redfern. Photographs by the author. Color illustrations by Gary Hincks. Times Books, New York, 1986. x, 242 pp. Paper, \$16.95. Reprint, 1983 ed.

**Mammal Evolution.** An Illustrated Guide. R. J. G. Savage. Illustrations by M. R. Long. Facts on File, New York, 1986. vi, 259 pp. \$35.

**Manipulation of Mammalian Development.** Ralph B. L. Gwatkin, Ed. Plenum, New York, 1986. xiv, 388 pp., illus. \$52.50. Developmental Biology: A Comprehensive Synthesis, vol. 4.

**Manual of Carbonate Sedimentology.** A Lexicographical Approach. T. J. A. Reijers and K. J. Hsu. Academic Press, Orlando, FL, 1986. xx, 302 pp., illus. \$85; paper, \$49.95.

**Markedness.** Fred R. Eckman, Edith A. Moravcsik, and Jessica R. Wirth, Eds. Plenum, New York, 1986. viii, 343 pp., illus. \$52.50. From a symposium, Milwaukee, WI, March 1983.

**Microscopic Methods in Metals.** U. Gonser, Ed. Springer-Verlag, New York, 1986. xvi, 457 pp., illus. \$60.50. Topics in Current Physics, vol. 40.

**The Microsporidia of Vertebrates.** Elizabeth U. Canning and Jirí Lom, with a contribution by Iva

(Continued on page 698)

## Products & Materials

### Word-Processing Software

Manuscript Manager is a word-processing software package that automatically makes a paper conform to Council of Biology Editors (CBE) or American Psychological Association (APA) style. The program automates entry of references, citations, footnotes, headers, tables, figures, equations, and the abstract, and it has been endorsed by both organizations as the official software version of their standards. For example, on-screen prompts guide the user in entering citations to ensure that the proper information and style are used. The program also checks that each citation has a reference and vice versa. Footnotes are automatically numbered, and a table of contents may be automatically generated. Macros may be programmed to influence either all documents or the current document only. To produce a scanner report, the program checks the manuscript for errors in style and counts the words in the document. Manuscript Manager operates on Apple IIe, Apple IIc, IBM PC, and IBM PC-compatible computers. An optional text-file converter transforms documents created by other word-processing packages into Manuscript Manager documents. Pergamon Software. Circle 562.

### Modular Clean Room

KleenFlex is a modular, vinyl clean room suited for short-term, temporary, or occasional need for a clean environment. The shell is 12 mil (0.3048 mm) thick and constructed from prefabricated vinyl sections. A quickly assembled steel framing system supports the clean room. The air conditioning unit both filters and recirculates the air and maintains a positive pressure to retain room inflation. KleenFlex may be installed in one day; the air conditioning unit requires only final utility and duct connections. The room may also be disassembled for storage or reassembly at another location. An optional raised and perforated floor is available for laminar flow requirements. Clean Room Technology. Circle 565.

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

### Tube Coatings

CML Tube Coatings convert polystyrene tubes or microtiter trays into hydrophilic, carboxylate-modified surfaces. The coating latex is poured into the tube, swirled around, and poured back out, and the tube is allowed to dry. The treated surface then can covalently bond antigens or antibodies for solid phase immunoassay applications. The coating is available diluted with water or with alcohol. Seragen. Circle 566.

### Ultramicrotome

The MT-2C ultramicrotome features knife-stage rotation of 360° for maximum control and stability, and it can section off-angle and allow for unusual specimen orientation. The POSITRAC self-locking, uni-



versal knife stage provides control without spring-loaded locks. The MT-2C features a stage-mounted block for accurate trimming. A fiber optic lighting system permits knife-to-block approach to within 20 nm, and a mechanical advance system advances the specimen in increments of 1 nm to 4 nm. RMC. Circle 545.

### Pulsed Electrophoresis Control System

The 4000 Series Pulforeiser is an electronic control system that permits single-dimension pulsed electrophoresis or polyacrylamide gel electrophoresis to resolve macromolecules of large molecular weight. The user may preset the forward and reverse migration time, the ratio of forward and reverse migration time, the total operating time, and the mode—bipolar or unipolar—of electrophoresis. Sockets in the front panel accept banana plugs from the auxiliary power supply and to the electrophoresis apparatus. Baekon. Circle 567.

### Separation Systems

Models 130A, 150A, 151A, and 152A are separation systems for isolating and purifying proteins, peptides, and polynucleotides. Each is designed for a specific application. The 130A prepares samples and purifies and analyzes proteins and peptides at low picomole levels. The 150A purifies proteins and peptides for conventional chromatographic procedures, and the 151A purifies synthetic peptides. The 152A analyzes, purifies, and characterizes synthetic polynucleotides and isolates DNA and RNA restriction fragments. Applied Biosystems. Circle 563.

### Literature

*Cytinert Serum Products for Research* is a brochure that describes photochemically disinfected sera. Lee BioMolecular Research Laboratories. Circle 571.

*Product Newsletter 8610* is a 16-page catalog of new products for gas chromatography. Chemical Research Supplies. Circle 574.

*Chemalog Hi-Lites* is a monthly magazine profiling new chemical products for biotechnological and other applications. Chemical Dynamics. Circle 575.

*Chromatography Accessories Catalog* lists high-performance liquid chromatography accessories. Aura Industries. Circle 576.

*Immunohistochemistry, Fluorescence, and Glycoprotein Purification Catalog* features over 70 new products. Vector Laboratories. Circle 577.

*Materials Research Catalog* contains 500 pages of pure metals, materials, and analytical standards. Johnson Matthey, Aesar Group. Circle 578.

*ASAP 2400* is a brochure about an automated physical adsorption instrument. Micromeritics. Circle 579.

*Laser Light Scattering Instruments* is a six-page brochure about DAWN laser photometers. Wyatt Technology. Circle 580.

*Research Chemical Catalog* contains over 200 pages of reagents for electrophoresis, chromatography supplies, dyes and stains, monomers, polymers, and photography supplies. Polysciences. Circle 584.

*Versacolor* describes a thermal transfer color plotter with high resolution. Versatec. Circle 582.

*Separation Products for Immunology* is a catalog of products for cell affinity chromatography, DNA synthesis, cell culture, cell separation by centrifugation, analytical and preparative electrophoresis systems, monoclonal antibody purification, and cell studies. Pharmacia. Circle 583.

(Continued from page 696)

Dyková. Academic Press, Orlando, FL, 1986. xii, 289 pp., illus. \$64.

**The Plant Viruses.** Vol. 2, The Rod-Shaped Plant Viruses. M. H. Van Regenmortel and Heinz Fraenkel-Conrat, Eds. Plenum, New York, 1986. xviii, 424 pp., illus. \$65. The Viruses.

**Practical Teratology.** Pamela Taylor. Academic Press, Orlando, FL, 1986. xii, 171 pp., illus. \$29.50.

**Predictability in Science and Society.** John Mason, P. Mathias, and J. H. Westcott, Eds. The Royal Society and the British Academy, London, 1986. viii, 145 pp., illus. Paper, £15.50. From a symposium, London, March 1986. Reprinted from *Proceedings of the Royal Society of London*, series A, vol. 407 (no. 1832), pp. 1-145, 1986.

**A Primer of Human Behavioral Pharmacology.** Alan Poling. Plenum, New York, 1986. xvi, 246 pp., illus. \$29.50. Applied Clinical Psychology.

**Principles and Methods of Reclamation Science.** With Case Studies from the Arid Southwest. Charles C. Reith and Loren D. Potter, Eds. University of New Mexico Press, Albuquerque, 1986. xx, 224 pp., illus. \$30; paper, \$17.50.

**Principles of Physiological Measurement.** James N. Cameron. Academic Press, Orlando, FL, 1986. x, 278 pp., illus. \$59.50; paper, \$23.95.

**Proceedings of the Conference Physics in Environmental and Biomedical Research.** (Rome, Nov. 1985.) S. Onori and E. Tabet, Eds. World Scientific, Philadelphia, 1986. xviii, 607 pp., illus. \$79.

**Production and Exchange of Stone Tools.** Prehistoric Obsidian In the Aegean. Robin Torrence. Cambridge University Press, New York, 1986. xiv, 256 pp., illus. \$44.50. New Studies in Archaeology.

**Sensory Analysis.** Donald Lamington. Academic Press, Orlando, FL, 1986. xiv, 306 pp., illus. \$72.

**The Shaky Game.** Einstein, Realism, and the Quantum Theory. Arthur Fine. University of Chicago Press, Chicago, 1986. xii, 186 pp. \$25. Science and Its Conceptual Foundations.

**A Sierra Nevada Flora.** Norman F. Weeden. 3rd ed. Wilderness Press, Berkeley, CA, 1986. vi, 406 pp., illus. Paper, \$10.95.

**A Skeleton in the Darkroom.** Stories of Serendipity in Science. Gilbert Shapiro. Harper and Row, New York, 1986. xvi, 160 pp., illus. \$13.95.

**The Social Psychology of Education.** Current Research and Theory. Robert S. Feldman, Ed. Cambridge University Press, New York, 1986. x, 381 pp., illus. \$42.50.

**Social Psychological Foundations for School Services.** Merl E. Bonney, Richard D. Grosz, and Albert E. Roark. Human Sciences Press, New York, 1986. 318 pp. \$39.95; paper, \$19.95.

**Song of the Whale.** Rex Weyler. Anchor Press (Doubleday), Garden City, NY, 1986. xii, 273 pp. + plates. \$16.95.

**Thrombosis and Thrombolysis.** E. I. Chasov and V. N. Smirnov, Eds. Consultants Bureau (Plenum), New York, 1986. x, 433 pp., illus. \$85. Translated from the Russian.

**Thunderstones and Shooting Stars.** The Meaning of Meteorites. Robert T. Dodd. Harvard University Press, Cambridge, MA, 1986. xii, 196 pp., illus. \$24.95.

**Tilings and Patterns.** Branko Grünbaum and G. C. Shepard. Freeman, New York, 1986. xii, 700 pp., illus. \$59.95.

**Tools of Radio Astronomy.** Kristen Rolf. Springer-Verlag, New York, 1986. xii, 319 pp., illus. \$62. Astronomy and Astrophysics Library.

**Vertebrate Reproduction.** A Textbook. Volker Blum. Springer-Verlag, New York, 1986. x, 405 pp., illus. Paper, \$36.50. Translated from the German edition (Berlin, 1985) by A. C. Whittle.

**Victorian Lunacy.** Richard M. Bucke and the Practice of Late Nineteenth-Century Psychiatry. S. E. D. Shortt. Cambridge University Press, New York, 1986. xvi, 207 pp., illus. \$29.95. Cambridge History of Medicine.

**Water and Solutes in Plants.** F. C. Steward, James F. Sutcliffe, and John E. Dale, Eds. Academic Press, Orlando, FL, 1986. xviii, 611 pp., illus. \$95. Plant Physiology, vol. 9.

**Wildlife 2000.** Modeling Habitat Relationships of Terrestrial Vertebrates. Jared Verner, Michael L. Morrison, and C. John Ralph, Eds. University of Wisconsin Press, Madison, 1986. xxvi, 470 pp., illus. \$17.50. From a symposium, Fallen Leaf Lake, CA, Oct. 1984.

**The Yoingu and their Land.** A System of Land Tenure and the Fight for its Recognition. Nancy M. Williams. Stanford University Press, Stanford, CA, 1986. xvi, 264 pp., illus., + plates. \$35.

# 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:** Thursday, 2 weeks prior to issue date (mailed on issue date).

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

**LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):** \$35.00 per line; \$350 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading and/or extra spaces, and all partial lines are counted as full lines. To calculate cost, multiply total lines  $\times$  \$35.00 = total cost of ad.

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

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

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

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

Blind ad replies should be addressed as follows:

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

## POSITIONS WANTED

**Anatomist/Administrator, Ph.D.** Ten years director for human gross anatomy and other medical school programs. Strong clinical orientation. Experienced in: curriculum and course development and review; student and faculty evaluation; student affairs, counseling and tutorials; computer-generated exam design and evaluation. Research program and publications. Supervisor LM and EM facility. Awards for graduate and undergraduate teaching. Seeks academic administrative position. Box 7, SCIENCE. X

**Anatomist/Zoologist, Ph.D.** Broad background, invertebrate/vertebrate biology, embryology; human anatomy; electron microscopy; experienced innovative teacher. Prefer small college teaching. Box 10, SCIENCE. 2/6, 13, 20

**Biochemist, Ph.D.** extensive research experience in enzyme purification and characterization, immobilization and modern laboratory techniques. Many publications. Seeks postdoctoral or research position. Box 11, SCIENCE. 2/6, 13

**Genetic Toxicologist** (Ph.D., 1985) extensive experience with an in vivo multicellular murine SCE assay involving bone marrow, alveolar macrophages and regenerating liver cells and an in vivo exposure/in vitro culture SCE assay involving murine lymphocytes from blood and lymphoid tissues. In addition, 1 year postdoctorate in somatic cell genetics with some recombinant DNA experience. Seeking position in industry or government. Box 12, SCIENCE. X

## POSITIONS WANTED

**Chemical/Medical/Business Writer:** Seeks freelance projects—all types. Will organize symposia, seminars, etc. Marsha E. Daman, Ph.D., P.O. Box 554, Bedminster, NJ 07921. Telephone: 201-234-2385. 2/6, 13, 20

**Gross Anatomist.** Ph.D. with 15 years of graduate teaching experience seeks a 9-month, teaching only, position. Box 13, SCIENCE. X

**Immunopathologist/Electron Microscopist, Ph.D.,** seeks position in biomedical company or core/reference laboratory in immunology, DNA hybridization, histochemistry, pathology or microscopy as director or administrator, 10 years of experience in administrative/management/methodology. Box 2, SCIENCE. 2/6, 13

**Radiochemist Ph.D.** Highly competent with strong background in molecular biology, radiotracer methodology, and more than 9 years of extensive research and development of radiopharmaceutical and animal models in areas of cell labeling and MoAb. Interested in collaboration and desires a challenging position in industry or academia. Box 14, SCIENCE. 2/6, 13

**Technical Writer, Ph.D.** Twenty years of experience in research and writing for scientific, technical, and popular markets. Credits include fifteen books in three languages and articles in varied scientific and academic journals. Seeks freelance projects of all kinds, including manuals, software documentation, grants and proposals, library research, manuscript critiques and editing, ghostwriting, lectures, and speeches. Box 214, SCIENCE. 2/6, 13, 20

## POSITIONS OPEN

### ANATOMIST

The Department of Anatomy seeks an individual to teach gross anatomy to medical, dental, and graduate students. Candidates should have 3 years of postdoctoral experience and have an active research program. An appointment can be made at the level of either assistant or associate professor. At the earliest the position could commence on 1 July 1987. Send applications, with an account of research interests, and the names of three referees, by 1 March 1987 to: **Dr. Alan Peters, Chairman, Department of Anatomy, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** An Equal Opportunity Employer.

**THE DEPARTMENT OF ANATOMY, THOMAS JEFFERSON UNIVERSITY,** is inviting applications to a tenure-track position as an **ASSISTANT PROFESSOR.** Applicants should have postdoctoral training and a demonstrable ability to develop a strong and creative research program which utilizes cellular and/or molecular biological techniques in the analysis of developmental mechanisms. Candidates may participate in an NIH-funded pre- and postdoctoral training program in developmental biology/teratology. Candidates will be expected to have or acquire experience in teaching human gross anatomy to permit participation in our team-taught course for freshman medical students. Send curriculum vitae, statement of research plans and objectives, and three letters of reference to: **Dr. Robert M. Greene, Search Committee Chairman, Department of Anatomy, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.** Thomas Jefferson University is an Affirmative Action/Equal Opportunity Employer.

### HIRAM COLLEGE

#### ASSISTANT PROFESSOR OF BIOLOGY

The Biology Department at Hiram College invites applications for a full-time tenure-track position effective September 1987. A Ph.D. is required. Teaching responsibilities include courses in developmental biology, immunology and microbiology. Participation in the general biology sequence and advanced molecular biology is expected. Electron microscopy experience is desirable. Additional responsibilities include academic advising, committees and sustained scholarly research.

Send curriculum vitae, a letter describing your scientific background, and three letters of reference to: **William Laughner, Chair, Biology Department, Hiram College, Hiram, OH 44234** by 1 March 1987. Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

The DEPARTMENT OF BIOCHEMICAL PHARMACOLOGY seeks applications at the Assistant Professor level from candidates with research interests in MOLECULAR PHARMACOLOGY. Departmental research strengths are in CNS and cardiovascular pharmacology. In addition to traditional alliances that the department maintains with the School of Medicine, strong collaborations exist with the neighboring Departments of Chemistry, Cell Biology, and Medicinal Chemistry, affording research support in the areas of magnetic resonance, fluorescence spectroscopy, x-ray crystallography and molecular graphics, electron microscopy, peptide and polynucleotide synthesis and sequencing, gene cloning, and monoclonal antibody production. Applications with research interests in these areas or complementary specialties are invited to apply.

Applications, including a letter of intent, curriculum vitae, a brief statement of research interests, and the names of three references should be sent to: Vijay C. Swamy, Department of Biochemical Pharmacology, School of Pharmacy, Faculty of Health Sciences, 313 Hochstetter Hall, State University of New York at Buffalo, Buffalo, NY 14260. This advertisement represents a renewed search for the position advertised in this journal in 1986. Applications should be submitted by 31 March 1987.

*An Affirmative Action/Equal Opportunity Employer.*

ERINDALE CAMPUS, UNIVERSITY OF TORONTO, is seeking applications for the position of ASSISTANT PROFESSOR OF CHEMISTRY (tenure stream), to be effective 1 July 1987, subject to budgetary approval. Present base salary: \$27,000. The successful candidate will be expected to teach at both the undergraduate and graduate level and to conduct an innovative research programme at the Erindale Campus, in an area at the chemistry-biology interface such as biological organic chemistry, biosynthesis, protein structure and function, or nucleic acid chemistry. Applications, consisting of curriculum vitae, an outline of the proposed research, and the names and addresses of three referees, should be sent by 6 March 1987 to: Professor S. G. Whittington, Chairman, Department of Chemistry, University of Toronto, Toronto, Ontario, M5S 1A1 Canada. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The University of Toronto encourages both women and men to apply.

### ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology, University of California, Los Angeles, invites applications for a tenure-track position as Assistant Professor of Pharmacology. Applicants should have teaching experience and research interests in molecular neuropharmacology. Salary range \$43,000 to \$48,800. Applications or nominations should be submitted with curriculum vitae, bibliography and the names of potential references to: Chairman, Neuropharmacology Search Committee, Department of Pharmacology, School of Medicine, Center for the Health Sciences, University of California, Los Angeles, CA 90024. All applications and inquiries will be treated in strict confidence. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR PLANT BIOLOGY-MICROBIOLOGY

The Program in Biology of Transylvania University invites applications for a tenure-track assistant professorship, effective September 1987. Primary responsibilities include undergraduate teaching of plant biology, microbiology, and general biology. Doctorate required, college-level teaching experience desirable. Send letter of application and curriculum vitae to: Dr. Rodney Hays, Program in Biology, Transylvania University, Lexington, KY 40508. *An Equal Opportunity Employer.*

### ASSISTANT-ASSOCIATE PROFESSOR

Applications are invited from cellular or molecular biologists for a tenure-track position. Research area open; preference for candidates interested in cranial neural systems. Send curriculum vitae and a statement of research background/goals to: Search Committee for Oral Biology, M. C. Whitehead, The Ohio State University (OSU), 305 West 12th Avenue, Columbus, OH 43210. OSU is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

ASSISTANT PROFESSOR IN RESIDENCE: Department of Anatomy at the University of California, San Francisco is seeking candidates for a non-tenure-track position of Assistant Professor In Residence. The successful candidate must have a Ph.D. degree (or equivalent) and must demonstrate significant experience in research in modern neuroanatomy and neurophysiology, including studies in intracellularly labeled somatosensory neurons, light and electron microscopic immunocytochemistry, and contemporary methods in electron microscopy. It is essential that the candidate have significant experience in teaching mammalian neuroanatomy. Finally, applicants should have a record of obtaining support for their research program. Duties of the position include: teaching graduate professional and graduate academic students, and neurobiological research. Applicants should submit curriculum vitae and representative publications and have three letters of recommendation sent to: Dr. Jennifer LaVail, Chairman, Neuroscientist Search Committee, Department of Anatomy, Box 0452, University of California at San Francisco, CA 94143. Applications received before 6 March 1987 will be considered. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR: WEED SCIENCE/PLANT PHYSIOLOGY. Tenure-track position in basic research in weed science with major emphasis on effects of herbicides on physiological and growth processes of weed and crop plants. Also teaching responsibilities. Qualification: Ph.D. in weed science or plant physiology with strong background in both areas. Submit curriculum vitae, transcripts, list of publications, and three letters of reference by 1 April 1987, to: Gregory Shaner, Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN 47907.

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

ASSISTANT OR ASSOCIATE PROFESSOR OF SURGERY—NONTENURE TRACK UNIVERSITY OF CALIFORNIA, SAN DIEGO. The Department of Surgery is seeking candidates for a faculty position as an electrophysiologist to study ion transport and electrical charges in human and animal models of colorectal cancer. The incumbent will design and supervise experiments aimed at understanding cellular and epithelial electrophysiologic events in colon cancer with eventual application in the early diagnosis of pre-malignant changes in the colonic epithelium of human subjects. The position requires a Ph.D. in physiology, biophysics, electrophysiology, or related areas; experience and productivity in above-mentioned scientific investigation preferred; experience in supervising technicians and experiments, assisting in grant writing and experimental design, presentation, and publication of research papers; teaching of medical students and residents. Closing date: 30 March 1987. Send curriculum vitae and bibliography to: Richard J. Davies, M.D., H891B, UCSD Medical Center, 225 Dickinson Street, San Diego, CA 92103. Salary related to academic rank and step within the established salary schedule of the University of California, San Diego. This position is guaranteed for 2 years and further extension is dependent upon funding. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### BRIGHAM YOUNG UNIVERSITY (BYU) ASSISTANT OR ASSOCIATE PROFESSOR OF ZOOLOGY MOLECULAR ENDOCRINOLOGY, MOLECULAR CELLULAR BIOLOGY, OR MOLECULAR DEVELOPMENTAL REGULATION

A tenure-track research and teaching position is available fall 1987. It requires a Ph.D. degree and postdoctoral experience. Preference will be given to applicants who have demonstrated the ability to develop a productive research program and to compete for extramural research support. BYU is a private university sponsored by The Church of Jesus Christ of Latter-Day Saints (Mormon). The successful applicant must be willing to maintain a life style consistent with the values of the sponsoring church. Women and minority candidates are encouraged to apply. Deadline: 15 March 1987. Send curriculum vitae, a statement of career goals and have three letters of reference sent to: Dr. James L. Farmer, Department of Zoology, 591 WIDB, Brigham Young University, Provo, UT 84602.

## POSITIONS OPEN

ASSOCIATE DIRECTOR, BLOOD BANK. The Division of Laboratory Medicine at the North Carolina Memorial Hospital seeks an Associate Director of the Blood Bank. This position also carries a primary tenure-track appointment in the Department of Pathology at the University of North Carolina at Chapel Hill. Candidates must be physicians who are certified by the American Board of Pathology in Blood Banking or who will be eligible for certification by the time of employment. Applicants should be committed to basic or applied research in transfusion medicine as well as clinical service. This position also offers opportunities to teach and collaborate in the development of educational programs at all professional levels. Rank and salary will depend on qualifications and experience. Members of minority groups and women are encouraged to identify themselves voluntarily. Those interested should send curriculum vitae, names of three references, and a brief description of experience and future plans to: Myra L. Collins, M.D., Ph.D., Division of Laboratory Medicine, Room 1106, North Carolina Memorial Hospital (NCMH) 204H, Chapel Hill, NC 27514. *University of North Carolina-NCMH is an Equal Opportunity/Affirmative Action Employer.* Application deadline: 31 March 1987.

### BIOCHEMIST VISITING ASSISTANT PROFESSOR (Advanced Rank possible in exceptional circumstances)

Applicants with backgrounds in biochemistry, development, and cellular biology are desired. Teaching responsibilities include courses in developmental biology and cellular biology/biochemistry. This is a 3-year visiting position which requires a Ph.D. degree. Postdoctoral experience is desirable. The position is available 1 July 1987. Please have curriculum vitae, a statement of your research and teaching interests, and three letters of recommendation sent to: Professor Henry W. Art, Chairman, Biology Department, Williams College, Williamstown, MA 01267 by 1 March 1987. We will start the evaluation of potential candidates immediately.

*An Equal Opportunity Affirmative Action Employer. Williams College especially welcomes applications from women and minority candidates.*

BIOGEOCHEMIST/BIOANALYTICAL CHEMIST—Tenure-track position beginning 1 September 1987 at assistant or associate professor level, Ph.D. required. Postdoctoral and/or teaching experience preferred. The individual will help develop a funded research program associated with the university's developing marine sciences program. Teaching duties in the area of expertise and general chemistry with supervision of undergraduate and M.S. level research. Send current curriculum vitae including statement of research and teaching interests, representative publications, graduate and undergraduate transcripts and arrange for submission of three letters of reference to: Dr. Alan Bates, Chemistry Department, Southeastern Massachusetts University (SMU), North Dartmouth, MA 02747. While applications will be accepted until the position is filled, screening by the committee will begin 2 March 1987. SMU is an Affirmative Action/Equal Opportunity Employer and welcomes applications from members of minority groups and women.

### LOCK HAVEN UNIVERSITY LOCK HAVEN, PA 17745

BIOCHEMIST/ORGANIC CHEMIST FACULTY POSITION, full time, tenure track, will be available at the instructor or assistant professor level starting in September 1987. Ph.D. in chemistry required; prior college teaching required. Candidate must be competent to teach undergraduate level courses in biochemistry, qualitative organic analysis and be competent in the use of traditional chemical instrumentation. Excellence in and enthusiasm for undergraduate instruction is of primary importance. Lock Haven University has an enrollment of over 2600 students, and is one of 14 state universities. Rank and salary commensurate with qualifications. Excellent fringe benefits. Send letter, curriculum vitae, copies of transcripts and the names, addresses, and telephone numbers of at least three professional references to: Alfred Hoberman, Chairman, Department of Chemistry/Physics/Geoscience, Lock Haven University, Lock Haven, PA 17745, by 20 March 1987. *Lock Haven University is an Equal Opportunity/Affirmative Action Title IX Employer.*

## POSITIONS OPEN

### BIOCHEMISTRY—MOLECULAR BIOLOGY

The Program in Biochemistry at Mount Holyoke College is seeking a **BIOCHEMIST/MOLECULAR BIOLOGIST** to fill a temporary position at the assistant professor level during the academic year 1987–88. Teaching responsibilities will be in the areas of introductory biochemistry, intermediary metabolism and molecular biology. Applicants should have a Ph.D. degree and research interests that utilize recombinant DNA technology in a way that can involve undergraduates. Please send curriculum vitae, a statement of research plans, transcripts, reprints of key publications, and arrange for three letters of recommendation to be sent to: **Dr. Jeffrey A. Knight, Chairman, Program in Biochemistry, Mount Holyoke College, South Hadley, MA 01075.** Deadline for applications is 1 March 1987. *Mount Holyoke College is an Equal Opportunity/Affirmative Action Employer, and we especially encourage applications from women and minority candidates.*

**BIOMEDICAL TECHNICIAN**—Performing molecular biology experiments including Southern blot analysis. B.A. or M.A. in biology. Knowledge and experience in molecular biology techniques. Send current curriculum vitae to or contact: **Jo Lewis, Cedars-Sinai Medical Center, 8700 Beverly Boulevard Brown Building, Los Angeles, CA 90048. Telephone: 213-855-5504.**

### BIOTECHNOLOGY

Applications are invited immediately for a tenure-track position at the rank of assistant professor beginning 1 July 1987. Minimum requirements are a Ph.D. in some aspect of molecular biology and 2 years of postdoctoral experience. Preference will be given to those with a background in applied biotechnology. The successful candidate will be expected to undertake research and teach courses in our new biotechnology program. In accordance with Canadian Immigration requirements, priority will be given to qualified Canadian citizens and permanent residents of Canada. *The University of Windsor offers Equal Opportunity for Employment to qualified female and male applicants.* The deadline for applications will be 15 May 1987 or until a suitable applicant is appointed. Send curriculum vitae, statement of research goals and interests, representative reprints and three letters of reference to: **Dr. H. B. Fackrell, Department of Biological Sciences, University of Windsor, Windsor, Ontario. N9B 3P4.**

### CARTILAGE/IMMUNOLOGY/BIOCHEMISTRY

Ph.D., preferably with relevant postdoctoral experience, for **RESEARCH ASSOCIATE** laboratory position at Case Western Reserve University studying cartilage immunology and biochemistry in osteoarthritis in humans and in animal models. Experience in one or more areas including monoclonal antibodies, cell culture, immunology, and immune assays (ELISA, RIA), and biochemistry (proteoglycans/collagens) preferred. Some or all U.S. training. Associate will supervise and contribute to ongoing research. Forward curriculum vitae and names of three references to: **Roland W. Moskowitz, M.D., 2073 Abington Road, Cleveland, OH 44106.** *An Equal Opportunity Employer.*

### CELL/MOLECULAR PHYSIOLOGIST

Applications are invited for a tenure-track position in the Department of Physiology of the Ohio State University College of Medicine. An individual or team with an established investigative program in cellular physiology of smooth or striated muscle is preferred, but full consideration will be given to cellular/molecular research in neural tissues. Emphasis could be on, but is not restricted to, contractile proteins,  $Ca^{2+}$  homeostasis, real-time imaging, ligand-gated channels, signal transduction, or gene expression. Appointment will be at a rank consistent with qualifications and experience. A Ph.D., M.D., or equivalent is required together with substantial postdoctoral experience. The Department has 20 full-time faculty with multidisciplinary interactions in cell and molecular biology, biotechnology, neuroscience, and digestive diseases programs in the College and University. Applicants should send by 1 March 1987 a brief description of present research interests, curriculum vitae, names of four referees and record of grant funding to: **J. D. Wood, Ph.D., Department of Physiology, 4196 Graves Hall, 333 West 10 Avenue, Columbus, OH 43210.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### CHAIR AND PROFESSOR OF ZOOLOGY

The Department of Zoology of Southern Illinois University at Carbondale invites applications for a 12-month tenure-track position. We are seeking a person with demonstrated ability to lead in research and teaching and who possesses a strong commitment to program and faculty development. The Chair is expected to teach at least one course per year. Preference will be given to persons with a specialty area that integrates well with existing department programs. A doctoral degree in zoology or a closely related field is required. Applicants must hold the rank of professor or possess the credentials for appointment at that rank. Salary will be commensurate with qualifications and experience. The Department presently has 20 full-time and 3 cross-appointed faculty; approximately 70 graduate students; 165 zoology undergraduate majors; and 197 in biological science and interdisciplinary programs in which zoology participates. Areas of specialty in the Department include: fisheries/wildlife biology, vertebrate and invertebrate ecology and systematics, animal behavior, anatomy/morphology, and developmental biology and genetics. The position starts 16 August 1987 and will remain open until filled. Send a letter of application, résumé of experience, transcripts of academic work, and at least three letters of reference by 15 March 1987 to: **Dr. Alan Woolf, Chairman of Search Committee, Department of Zoology, Southern Illinois University at Carbondale (SIUC), IL 62901.** *SIUC is an Equal Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.*

### CHAIRMAN DEPARTMENT OF PHYSIOLOGY

The Medical College of Ohio, a free-standing state-supported academic health science center, invites applications and nominations for the position of Chairman of the Department of Physiology. The nominees should have distinguished records of accomplishments in biomedical research, and appropriate experience in medical and graduate education. The successful candidate will be expected to recruit new faculty and to provide leadership in the development of new programs in molecular and cellular physiology. Nominations and applications should be received no later than 15 March 1987, and should be addressed to: **Amir Askari, Ph.D., Chairman, Search Committee for Physiology Chairman, Department of Pharmacology, Medical College of Ohio, Toledo, OH 43699.** *Equal Opportunity Employer*

### CHAIRPERSON

Applications are invited for **PROFESSOR AND CHAIRPERSON, Department of Entomology and Applied Ecology, University of Delaware.** We seek candidates who will continue superior achievement in research and who demonstrate commitment to quality teaching. Leadership in developing and implementing a Ph.D. program to augment a strong M.S. program. Research specialty is open but should complement the goals of the department. Salary and fringe benefits are competitive. Committed to academic excellence, the University of Delaware is a mid-sized, comprehensive land grant institution with convenient access to major museum, USDA, and industrial research facilities. The position is available 1 July 1987; screening will begin 1 March 1987. The search will continue until the position is filled. Send résumé and names, addresses, and telephone numbers of four referees to: **Chairperson, Search Committee, Department of Entomology and Applied Ecology, University of Delaware, Newark, DE 19717-1303.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.*

**CHIEF OF DIVISION OF ANATOMICAL PATHOLOGY—PEDIATRIC PATHOLOGIST.** Immediately opening. Children's Memorial Hospital, a tertiary care major teaching hospital affiliated to Northwestern University is seeking a chief in the Division of Anatomical Pathology. The candidate is required to be board certified in Anatomical Pathology and to have demonstrated excellent ability in surgical pathology, pediatric pathology, and teaching. Must be qualified for Northwestern University faculty position at associate professor or professor level. Salary is negotiable and competitive. Apply with curriculum vitae, bibliography and names of three references to: **F. Gonzalez-Crussi, M.D., Chairman of Search Committee, Children's Memorial Hospital, 2300 Children's Plaza, Chicago, IL 60614.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

### CHAIRPERSON FOR THE DEPARTMENT OF SURGICAL SCIENCES SCHOOL OF VETERINARY MEDICINE UNIVERSITY OF WISCONSIN—MADISON

The Department of Surgical Sciences, School of Veterinary Medicine, invites applications for a tenured position as Department Chair. Salary will be commensurate with qualifications. Candidates should possess a D.V.M. degree. Board-certification and advanced degrees (M.S., Ph.D.) are desirable. In addition to excellence in research and/or teaching, the candidate should possess strong administrative capabilities.

Send curriculum vitae, names of at least three references, and a letter of intent by 1 March 1987 to:

**Dr. E. Gregory MacEwen, Chairman  
Search Committee  
School of Veterinary Medicine  
University of Wisconsin  
2015 Linden Drive West, Madison, WI 53706**  
*An Affirmative Action Equal Opportunity Employer.*

### MEDICAL CHAIRPERSON DEPARTMENT OF ANATOMY UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY ROBERT WOOD JOHNSON MEDICAL SCHOOL

Robert Wood Johnson [formerly Rutgers Medical School of the University of Medicine and Dentistry of New Jersey (UMDNJ)] invites applications and nominations for the position of Chairperson of Anatomy. The applicant or nominee should have an outstanding reputation for research in an area of cellular, molecular developmental biology or neurobiology. Current faculty research interests include neurobiology, muscle and cell motility, and reproductive endocrinology. The new chairperson will have the opportunity to appoint several additional faculty to the Department.

The Robert Wood Johnson Medical School is in a period of active growth. Initiatives in progress in Piscataway/New Brunswick at the combined campuses of the University of Medicine and Dentistry of New Jersey and of Rutgers University are directed across the life sciences, from medicine to agriculture. It is anticipated that more than 75 new faculty will be added to the basic medical and biological sciences over the next 5 to 7 years.

Applicants should send curriculum vitae, including past and current record, plus list of publications, to: **Dr. Henry Murphree, Chairman, Department of Psychiatry, UMDNJ-Robert Wood Johnson Medical School (SCD), 675 Hoes Lane, Piscataway, NJ 08854-5635.** *UMDNJ-Robert Wood Johnson Medical School is an Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

### CHIEF OF DIVISION OF CLINICAL PATHOLOGY

Immediately opening. Children's Memorial Hospital, a tertiary care major teaching hospital affiliated to Northwestern University is seeking a chief in the Division of Clinical Pathology. The candidate is required to be Board Certified in anatomical pathology/clinical pathology or clinical pathology. Administrative, clinical, teaching and research responsibilities, and qualified for Northwestern University faculty position at associate professor or professor level. Salary is negotiable and competitive. Send curriculum vitae, bibliography, and names of three references to: **F. Gonzalez-Crussi, M.D., Chairman, Search Committee, Children's Memorial Hospital, 2300 Children's Plaza, Chicago, IL 60614.** *An Equal Opportunity Employer.*

### CONSULTANT IN TOXICOLOGY

Full-time position for scientist broadly trained in toxicology, chemistry, biology, and environmental science or engineering. Position requires keen analytical skills, an ability to write quickly and well, and the capability to communicate effectively with clients. Work includes scientific support for litigation and regulatory compliance, risk assessment, environmental management, and solving related environmental and health problems. Salary dependent upon degrees and experience. Send curriculum vitae and names of references to: **Dr. Laura C. Green, Meta Systems Inc., 10 Holworthy Street, Cambridge, MA 02138.** *An Equal Opportunity Employer.*



## POST DOCTORAL POSITION— MOLECULAR BIOLOGY

**NATIONAL INSTITUTES  
OF ALLERGY AND INFECTIOUS  
DISEASES**

**NATIONAL INSTITUTES  
OF HEALTH**

**PUBLIC HEALTH SERVICE**

Ph.D. or M.D. Must have training in molecular biology with experience in recombinant DNA technology, DNA sequencing, expression vectors for application to molecular parasitology. Previous experience in parasitology not a prerequisite. Must be U.S. citizen. Please send curriculum vitae and names of three references to **Dr. Eric A. Ottesen, National Institutes of Health, Laboratory of Parasitic Diseases, Bldg. 5, Room 112, Bethesda, Maryland 20892.**

*An Equal Opportunity Employer*

## MANAGEMENT, TECHNICAL CONTRIBUTORS

Oread Laboratories, Inc. is currently in the process of assembling its managerial and technical team. Applicants with experience and in-depth familiarity with the operation of bioanalytical laboratories are sought with opportunity for equity participation for qualifying individuals.

The organization is conceived as the commercializing arm of the Center for Bioanalytical Research at the University of Kansas. The Center and Oread extend the state of the art in bioanalysis.

Those interested please write to:

Sara Schlappi  
Oread Laboratories, Inc.  
2065 Constant Avenue  
Lawrence, KS 66046

## FACULTY POSITION IN PHARMACOLOGY ST. JOHN'S UNIVERSITY COLLEGE OF PHARMACY AND ALLIED HEALTH PROFESSIONS

Applications are invited for a tenure-track position at the assistant professor level in the area of pharmacology. Rank and salary are commensurate with the applicant's qualifications and experience. This position is for the academic year with the opportunity for summer employment.

Persons applying should possess a Ph.D. in pharmacology or a related field. An undergraduate degree from an accredited college of pharmacy is desirable. Primary responsibilities include teaching undergraduate and graduate courses in pharmacology and directing an active research program in an area of specialization.

Applicants should provide an updated curriculum vitae including teaching and research interests and a list of three references. Applications should be sent to **Dr. Amrit L. Kapcor, Chairman, Department of Pharmaceutical Sciences, College of Pharmacy and Allied Health Professions, St. John's University, Jamaica, NY 11439.**

Equal Opportunity Employer (M/F)

**THE UNIVERSITY IS  
ST. JOHN'S**

## Research Immunologist

A **PhD level position** is available within our Medical Products Department. This is an excellent opportunity for scientific and career development with a leader in drug research. You will conduct independent research programs in cellular immunology directed at improving the efficiency of selecting and producing clinically useful monoclonal antibodies. To qualify you should have a technical background in cellular immunology and experience in cellular analysis and flow cytometry with a doctorate degree in Immunology, Microbiology or Biochemistry.

**You'll find** a highly stimulating scientific environment in a modern research facility located near Wilmington, DE. We offer excellent compensation and benefits including relocation. Our Mid-Atlantic location offers an attractive lifestyle with easy access to a wide range of academic, cultural and recreational activities. Interested candidates should send their resumes with salary requirements and references to: **K.L. Mays, Employee Relations Department, Room X50602, Du Pont Company, Wilmington, DE 19898.**



U.S. Citizenship or Permanent VISA Required.  
An Equal Opportunity Employer M/F/H/V

## SENIOR RESEARCH BIOCHEMIST

We have an immediate need for a Senior Research Biochemist to become part of our innovative Tumor Biology Department. The applicant will have an opportunity to do fundamental research in the area of cell surface glycoproteins and tumor metastases. The applicant should have a PhD in biological sciences with 1 or 2 years of post doctoral experience in biochemistry and enzymology. Research experience in tumor metastases is a plus. The ability of the applicant to work independently as demonstrated by publication record and to work well as part of a group is essential.

Merrell Dow Research Institute is a subsidiary of Dow Chemical located in suburban Cincinnati. We offer excellent compensation, comprehensive benefits and relocation assistance. If you are interested in fundamental research and would like to work for a rapidly growing research institute, send your curriculum vitae with names of three references to:

**Merrell Dow**

**Personnel Services Manager  
(Refer to Job Code SPS)**

**MERRELL DOW  
RESEARCH INSTITUTE**

**2110 East Galbraith Road  
Cincinnati, OH 45215**

U.S. Citizenship or  
Permanent Visa Required  
Equal Opportunity Employer M/F/H/V

## POSITIONS OPEN

### CHIEF OF MEDICINE ROSWELL PARK MEMORIAL INSTITUTE BUFFALO, NEW YORK 14263

The Roswell Park Memorial Institute is seeking a Chief of Medicine who will have responsibilities for the direction and administration of existing sections of specialties in oncology, as well as an expanded program in medical support services. The candidate must be Board-certified in internal medicine and have strong qualifications as an established research investigator in oncology. The qualifications include substantial academic credentials in order to qualify for appointment as associate professor or professor at State University of New York at Buffalo School of Medicine. Apply by sending curriculum vitae to: **Andrew A. Gage, M.D., Associate Institute Director for Clinical Affairs, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263.** *An Affirmative Action Equal Opportunity Employer, M/F.*

**CLINICAL MICROBIOLOGIST—FACULTY POSITION—MEDICAL TECHNOLOGY PROGRAM**—University-based 2+2 Medical Technology Program is now accepting applications for an **ASSISTANT PROFESSOR**, 9-month, tenure-track position. Minimum requirements: Master's degree with a doctorate preferred, minimum of 3 years of clinical and/or teaching experience, and national professional certification. Duties: Primary teaching responsibilities include the development and implementation of lecture and laboratory courses in clinical microbiology; limited responsibilities for clinical practicum; participation in advisement of students and University service required. The successful candidate will be expected to maintain an active research program in his/her area of expertise. Available: 1 September 1987. Contact: Submit nominations and applications including a full curriculum vitae with copies of publications and three letters of evaluation (sent separately) by 30 March 1987, to: **Milton H. Stetson, Ph.D., Chairperson, Medical Technology Search Committee, School of Life and Health Sciences, University of Delaware, Newark, DE 19716.** *Equal Opportunity/Affirmative Action Employer.*

**CLINICAL TOXICOLOGY/FACULTY:** In anticipation of a new, campus-wide program in Clinical Toxicology, **The University of Arkansas for Medical Sciences (UAMS) College of Pharmacy** announces availability of a faculty position. Candidates must possess an earned Pharm.D. or Ph.D. degree. Although a postdoctoral research fellowship, or equivalent, is preferred, those having completed specialty residency training in clinical toxicology are considered eligible. Responsibilities will include contributing to the ongoing research program in toxicology, interacting with faculty and students in other colleges and departments, and clinical service to patients. Salary and rank are commensurate with experience. A joint appointment in another health-related department is anticipated. Pharmacy licensure in Arkansas is mandatory. **Dr. Bruce D. Clayton, UAMS, Slot 522, 4301 West Markham, Little Rock, AR 72205.** Telephone: 501-661-5557.

### DIRECTOR OF BEHAVIORAL NEUROSCIENCE SERVICE

The Department of Psychiatry of the School of Medicine, University of California, San Francisco (UCSF), is seeking a director for a 21-bed adult inpatient unit, the Behavioral Neuroscience Service, based at the Langley Porter Psychiatric Institute. The Behavioral Neuroscience Service is an established clinical research ward with an emphasis on biological psychiatry. The incumbent will be responsible for the development and coordination of clinical service, education, and research activities which are centered on the ward. The position will be at the assistant professor level and will be available on 1 July 1987.

The ideal candidate would be a Board-certified psychiatrist, with a record of clinical research in biological psychiatry, the capacity for skilled clinical and educational leadership, and demonstrated ability in administration. Eligibility for California licensure is required. Applications must be received by 1 March 1987. Please send résumé to: **Craig Van Dyke, M.D., Search Committee Chair, Psychiatry Service (116N), Veterans Administration Medical Center, 4150 Clement Street, San Francisco, CA 94121.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

**CRIMINALIST/FORENSIC SCIENTIST** for a private lab in northeast Ohio. Will perform forensic examinations of physical evidence from police agencies, to include: chemical analysis of controlled substances; toxicological analysis of body fluids; serological and arson examination of physical evidence. Requires M.S. in forensic science; membership in American Academy of Forensic Scientist and/or Forensic Science Society; judicially recognized as an expert witness. No experience required, 40-hour week, \$1500 per month. Send résumé with this ad to: **L. Ellison, JO #1041331, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

### ADMINISTRATIVE DIRECTOR OF MICROSURGICAL RESEARCH CENTER

The Eastern Virginia Medical School is presently inviting applications to fill the **ADMINISTRATIVE DIRECTORSHIP OF THE MICROSURGICAL RESEARCH CENTER (MRC)**. The MRC is a modern, fully equipped research facility whose mission is to promote interdisciplinary teaching as well as basic and clinical research and research training in the microneurosurgical and microsurgical disciplines. The administrative director will be responsible for the daily logistical operations of the laboratory and will work closely with the chairman of plastic surgery and a scientific overview committee on long-term planning and decision making of MRC research and teaching programs. The successful candidate should possess either a Ph.D. or an M.D. coupled with evidence of scholarly achievement in an academic setting with preferred experience as a neuroscientist. A senior scientist with an established history of extramural support will be viewed favorably. Send a letter of intent, current curriculum vitae, plus three letters of recommendation before 30 April 1987 to:

**James H. Carraway, M.D.  
Eastern Virginia Medical School  
P.O. Box 1980  
Norfolk, VA 23501**

*Eastern Virginia Medical School is an Affirmative Action and Equal Opportunity Employer.*

### DIRECTOR OF NEUROPSYCHOLOGY

The Department of Neurology at the Massachusetts General Hospital is searching for a Director of Neuropsychology. The position is offered at the rank of assistant or associate professor of neurology (neuroscience) at Harvard Medical School. The applicant should have a doctorate with postdoctoral academic and research experience in any of the brain sciences, substantial experience with neuropsychological testing in patients with neurological disorders and/or in research subjects, and a practical working knowledge of uses of computers in data management and processing. Send applications including curriculum vitae and letter of interest to: **Dr. Joseph B. Martin, Professor and Chairman, Department of Neurology, Massachusetts General Hospital, Boston, MA 02114.** *The Massachusetts General Hospital is an Equal Opportunity Employer. (Women and minorities are encouraged to apply for this position.)*

### ENDOWED CHAIR IN NEPHROLOGICAL RESEARCH

The Department of Medicine of the University of Florida, College of Medicine is seeking applications for an **ENDOWED CHAIR IN NEPHROLOGICAL RESEARCH**. The endowed chair, with assets in excess of \$1 million, was established by the State of Florida's Eminent Scholars Program and was made possible by a generous contribution from a private donor. The individual who will fill the chair will have a full-time faculty appointment in the Division of Nephrology, Hypertension and Transplantation in the Department of Medicine of the University of Florida College of Medicine. The appointee should have an M.D. or M.D./Ph.D. degree and a well-established, creative and productive research program. Appropriate areas of research include molecular biology and biochemistry, immunology, transport physiology, hypertension, and cell biology. Salary is negotiable commensurate with education and experience. Anticipated starting date is 1 September 1987. Interested individuals should write by 31 May 1987: **James E. McGuigan, M.D., Chairman, Search Committee, Chair in Nephrological Research, Department of Medicine, College of Medicine, Box J-277, University of Florida Health Center, Gainesville, FL 32610.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**DIVISION CHIEF:** The Department of Pediatrics of the University of Florida, College of Medicine, is seeking applications for the position of **CHIEF OF THE DIVISION OF HUMAN GENETICS**. This is a senior faculty position and appointment is anticipated at the associate or full professor level. The human genetics programs represent an integrated unit that provides clinical genetic services to northern Florida. Members of the Division conduct clinical and basic scientific research and are responsible for teaching genetics to medical and graduate students, residents, and fellows. Candidates should have an M.D. degree and should provide evidence of demonstrated leadership abilities in teaching, research, and clinical activities. A strong background in molecular genetics and its clinical application is highly desired. Salary is negotiable. Applications including curriculum vitae should be sent to: **Lodewyk H. S. Van Mierop, M.D., Chairman, Search Committee, Department of Pediatrics, Box J-296, University of Florida Health Center, Gainesville, FL 32610.** Deadline for applications is 1 May 1987. Anticipated start date is 1 September 1987. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

### ECOLOGIST

**Valparaiso University**, a private, Christian institution in the Lutheran tradition located in northwestern Indiana, invites applications for a tenure-track position at the level of assistant professor, beginning August 1987. A Ph.D. in ecology with exposure in both plants and animals and a strong commitment to undergraduate teaching are required. Teaching responsibilities include an upper-level ecology course with laboratory, an intermediate-level field biology and/or environmental science course, and an introductory course for majors. An active research program, including supervision of undergraduate research, is also required. Submit letter of application, curriculum vitae, transcripts, and three letters of reference to: **Dr. James Tan, Chairman, Department of Biology, Valparaiso University, Valparaiso, IN 46383.** Telephone: 219-464-5373. *An Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION/STABLE ISOTOPES UNIVERSITY OF CALIFORNIA SANTA BARBARA

The Department of Geological Sciences, University of California, Santa Barbara, is seeking candidates for a tenure-track faculty position in the area of light-stable isotopes especially in marine related science. The successful candidate will be responsible for teaching and research in the applications of light-stable isotopes in such areas as marine and terrestrial geology, marine science general; and in graduate and undergraduate teaching. The university will soon develop a light-stable isotope laboratory. Candidates must possess a Ph.D. in geology or oceanography with a demonstrated record of research accomplishments. Rank and salary are negotiable. The position is available effective 1 July 1987.

Applicants should send résumé and name of five referees to: **Dr. Michael Fuller, Chairperson, Department of Geological Sciences, University of California, Santa Barbara, CA 93106.** Applications will be reviewed beginning 20 March 1987 and thereafter until the position is filled. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### IMMUNOLOGIST

The Department of Microbiology and Immunology and the Lineberger Cancer Research Center, University of North Carolina (UNC), School of Medicine, Chapel Hill invite applications for a tenure-track **ASSISTANT/ASSOCIATE PROFESSORSHIP IN IMMUNOLOGY**. We seek an individual with an interest in teaching immunology to graduate students and other students in health affairs, and demonstrably capable of conducting an independent research program. We particularly seek candidates with interest in the molecular biology, biochemistry or cell biology of T-cell development, differentiation, or function. This position will be available summer, 1987. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. We encourage applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily.* Reply by 25 February 1987, with curriculum vitae and names and addresses of references to: **Jeffrey A. Frelinger, Ph.D., 804 Faculty Laboratory Office Building, UNC, Chapel Hill, NC 27514.**

**CANCER PREVENTION FELLOWSHIP  
PROGRAM (CPFP)**

**NATIONAL CANCER INSTITUTE**

**National Institutes of Health  
Public Health Service**

The Division of Cancer Prevention and Control is accepting fellowship applications for a proposed August 31, 1987, entry into CPFP. Funding permitting, up to ten individuals may be accepted for three years of training. Requirements are: M.D., D.O., or an accredited doctoral degree in a discipline related to cancer prevention and research (medicine, biomedical, or behavioral, nutritional science) or equivalent and academic-professional excellence supported by official transcripts and four letters of reference, and United States citizenship or a resident alien eligible for citizenship within four years at the time of application. Current salary ranges for an M.D./D.O. or a Ph.D., respectively, are \$26,000-\$35,000 or \$18,000-\$31,000 per annum. Send a postcard with your name and address to **Ms. Nancy E. Garner, NIH/NCI/DCPC/CCAB, Blair Building, Room 4A01, Bethesda, MD 20892-4200**, or call (301) 427-8788 for application and information packet.

**DEADLINE FOR RECEIPT OF  
APPLICATIONS IS MARCH 16, 1987**

*An Equal Opportunity Employer*

**IMMUNOLOGY/  
VIROLOGY  
BIO-CHEMISTRY**

E.N.I. has current openings for PhD-level Scientists in above discipline.

Positions require 2 or more years of post-doctorate and/or industrial laboratory experience in the development of Immunological diagnostics assays.

Please forward C.V. in confidence to:  
**GALE LININGER, at:**



**ELECTRO-NUCLEONICS, INC.**

**7101 Riverwood Drive  
Columbia, Md. 21046**

equal opportunity employer M/F

**DARTMOUTH COLLEGE**

**Two Tenure Track Positions  
in Environmental Studies**

One appointment is at the Assistant Professor rank; the other at the Assistant or Associate Professor level. Both require the PhD or equivalent, and joint appointment with other departments is possible. Candidates for one position should have particular strength in terrestrial ecology or related field, with special interests in plant physiology, nutrient cycling, energy flow, forestry, community structure or soils. The other position will be filled by someone with training in the earth, hydrologic or atmospheric sciences or in physical geography. Both candidates will be expected to have interest in the policy implications of environmental science. Successful candidates will be expected to conduct productive independent research, and contribute energetically and imaginatively to teaching and research in the multidisciplinary Environmental Studies Program. The Program offers courses in environmental science, policy, and values, and a foreign study program in Kenya. Research opportunities include a multidisciplinary study of the effects of atmospheric pollution and other influences on a spruce-fir forest at the College-owned research site on Mt. Moosilauke. Applicants should submit curriculum vitae, a statement describing current and future research plans, a description of teaching experience and interests, and the names of three references. References should be asked to send letters directly to:

**Professor James F. Hornig  
Environmental Studies, Dartmouth College  
103 Nathan Smith Building  
Hanover, NH 03755**

We will begin to review applications March 1. Dartmouth is an equal opportunity/affirmative action employer.

**SUMMER 1987  
TEN ENVIRONMENTAL SCIENCE AND  
ENGINEERING FELLOWSHIPS**

**Applications Invited**

The American Association for the Advancement of Science (AAAS) invites applications for ten environmental science and engineering fellowships available for summer 1987. The fellows will work closely with the Environmental Protection Agency (EPA), Office of Research and Development, and other program offices, in Washington, DC, and assist in identifying and assessing the significance of long-range environmental problems and opportunities. The 10-week appointments are scheduled for 8 June through 14 August 1987. The awards will be announced prior to the end of April 1987.

Postdoctoral to mid-career scientists, engineers, and other appropriate professionals are encouraged to apply. Candidates may be from the physical, biological, or behavioral sciences, or any field of engineering or other relevant professional fields. They are expected to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds.

The 1987 Environmental Fellows will receive a taxable stipend of \$675 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowships.

A detailed, future-oriented research project will be conducted by each fellow which is of mutual interest to him or herself and the EPA. A project report will be submitted at the completion of the summer's work. Typical areas of research interest within EPA include: environmental risk assessment; biological pesticides; acid deposition; mobile source air pollution; oxidants, gases and particles; municipal waste water and spills; drinking water; hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

For further information and specific application requirements contact:

**Patricia S. Curlin, Manager  
Environmental Science and Engineering Fellows Program  
American Association for the Advancement of Science  
1333 H Street, NW, Washington, DC 20005  
Telephone: 202-326-6600**

*Deadline for applications is 10 March 1987.*

**U.S. PATENT AND TRADEMARK OFFICE**

**POSITION:**

**Microbiologist/Patent Examiner**

Opportunity involves the scientific and legal evaluation of patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, cell biology, microorganisms, cell culture, fermentation, enzymology or clinical chemistry.

**QUALIFICATIONS:**

A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Microbiology or cell Biology.

A Ph.D. or M.S. degree with relevant research experience is preferred. A B.S. degree with significant research experience will be considered.

Research Experience in any of the following areas would be beneficial: DNA cloning, gene expression, sequencing techniques, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunoassays, hybridization techniques, fermentation, enzymatic reactions, diagnostics and automation of clinical analysis.

**SALARY:**

Dependent upon experience and qualifications.

**LOCATION OF POSITION:** Arlington, VA

For further information contact:

**Nancy Strother  
Patent and Trademark Office  
Office of Personnel, C&E  
CPK 1, Suite 700  
Washington, D.C. 20231  
703-557-1244**



## POSITIONS OPEN

### ENVIRONMENTAL BIOLOGIST

The School of Applied Biology invites applications for a tenure-track position at the junior level for September 1987. Applicant should have expertise in one of the following: microbial ecology, animal toxicology, or plant toxicology. Teaching responsibilities will include courses in one of the areas listed above as well as general biology. Applicants should have postdoctoral experience and be able to continue with or develop an independent research program.

Send curriculum vitae, description of proposed research and the names of three references to: **T. G. Tornabene, Director, School of Applied Biology, Georgia Institute of Technology, Atlanta, GA 30332.** Closing date is 30 April 1987. *The Georgia Institute of Technology is a unit of the University System of Georgia and is an Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITION.** Recent Ph.D. in instrumental/analytical or biochemistry for tenure-track position in chemistry department (ACS-certified) of a state college. To teach undergraduate courses in Biochemistry and Instrumental Analysis and aid in the development of undergraduate research programs. Position available starting in August 1987. Salary and rank negotiable. Applications received until position filled. Early application is encouraged. Send résumé, transcripts and three letters of recommendation to:

**Dr. Barbara J. Oden, Chair**  
Division of Natural Sciences and Mathematics  
West Virginia State College  
Institute, WV 25112

*An Equal Opportunity/Affirmative Action Institution.*

One **tenure-track faculty** (either an "A" base or "B" base) position in **molecular virology** and immunology at the University of Minnesota. This position is available at the **ASSISTANT PROFESSOR** level. Duties will include research on the characterization of disease agents and immune responses in pigs and cattle, with special emphasis on viral diseases. To participate in team research in these fields and contribute expertise in molecular-level research techniques to the research programs. The successful candidate will be involved in professional and graduate teaching, as well as graduate student training. Candidates must have a B.A. or B.S. degree and a Ph.D. degree. A D.V.M. degree and postdoctoral experience are desirable. Three years of research experience in molecular virology and immunology. Ability to obtain research funds and evidence of research productivity are required. Applicants must have experience in the clinical implications of molecular-level research in infectious disease control in food animals. Salary range is \$35,000 to \$45,000 (12 months); \$28,636 to \$36,818 (9 months). Send a letter of application describing research interests, curriculum vitae, and the names and addresses of three references to: **Dr. Carlos Pijoan, University of Minnesota, Large Animal Clinical Sciences Department (G), 385 Animal Science/Veterinary Medicine Building, 1988 Fitch Avenue, St. Paul, MN 55108.** Application deadline is 1 April 1987. Appointment will begin on 1 July 1987, or later. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE SOUTHERN FOREST EXPERIMENT STATION

**HYDROLOGIST, USDA, Southern Forest Experiment Station, Rio Piedras, Puerto Rico,** is seeking a hydrologist (temporary, 2 years) to conduct studies on the relation between forest management techniques and water quality in tropical watersheds. The research is primarily concerned with nonpoint source pollution produced as erosion, nutrients cycled through the watershed system, and other contaminants entering surface water leaving forest lands. Knowledge of and skill in performing nonpoint source pollution research, skill in conducting watershed management research (with actual field experience); and, the ability to report results orally and in writing are required. Either a master's or Ph.D. or equivalent education and experience are required. U.S. citizenship is required. Salary commensurate with experience, GS-11/12/13 (\$27,172 to \$38,727). Information concerning the position may be obtained by telephone: **504-589-3921. NO COLLECT CALLS.** *The USDA is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### DEPARTMENT OF ANATOMY UNIVERSITY OF ARIZONA

Applications are being accepted for two tenure-track faculty positions which are anticipated to be filled at the assistant or associate professor level by 1 July 1987. Candidates for assistant professorship must have postdoctoral experience and be able to develop a strong, extramurally funded, independent research program. Candidates for associate professorship must have an established research program with demonstrated ability to secure extramural funding. Additional requirements include ability to teach cell biology and/or human morphology to graduate and professional students in the health sciences. Preference will be given to candidates who have active research programs in either developmental cellular neurobiology with expertise in fluorescence-activated cell sorting or in tissue and cellular biology with expertise in cell membrane recording including patch-clamp techniques as well as computer-based morphometry, digital image processing and analysis, and software application/development for biological applications. Deadline for receipt of all application materials is 2 March 1987. Send curriculum vitae, brief description of research interests, and three letters of reference to: **Dr. Robert S. McCuskey, Professor and Head, Department of Anatomy, College of Medicine, The University of Arizona, 1501 North Campbell, Tucson, AZ 85724.** *An Equal Opportunity/Affirmative Action Employer.*

**TWO FACULTY POSITIONS:** (1) **BIOCHEMIST**, assistant professor, tenure-track to teach general biochemistry and graduate courses in area of specialization, to conduct a vigorous research program, to participate in faculty governance and to share student advising on the main campus. Postdoctoral experience required. (2) **BIOLOGY INSTRUCTOR**, nontenure track, must teach General Biology, Ecology of South Florida and Human Biology at the Bay Vista Campus, and must advise students and participate in faculty governance. Teaching at the main campus in a specialized area (such as Entomology) will be required of the instructor position. **BOTH POSITIONS:** apply with curriculum vitae, three letters of reference, and recent publications by 26 February 1987 to: **Search Committee, Department of Biological Sciences, Florida International University, Miami, FL 33199.** *FIU is a member of the State University System of Florida which is an Affirmative Action/Equal Opportunity Employer.*

**IMMUNOLOGIST.** Assistant professor, tenure-track position beginning 8 September 1987. Teach undergraduate courses in immunology, develop an advanced course in hybridoma techniques and cellular immunity, teach human genetics. Ph.D. with major emphasis in immunology and hybridoma techniques and training in human genetics required. Possible election as department chair. Send curriculum vitae and three letters of reference by 6 March 1987 to: **Dr. W. L. Ezell, Department of Biological Sciences, St. Cloud State University, St. Cloud, MN 56301.** *An Equal Opportunity/Affirmative Action Employer.*

### LABORATORY ANIMAL SPECIALIST

The Division of Animal Medicine, University of Washington School of Medicine, invites applications for a **FACULTY POSITION** (associate professor rank) in laboratory animal medicine and science. Responsibilities include coordinating the technical and scientific aspects of the Division's animal resources program, overseeing University compliance with AAALAC standards and applicable animal care regulations, conducting comparative medical research in an area of interest, and participating in the teaching programs of the Division. The salary of the position is negotiable, but is commensurate with the incumbent's background and experience. ACLAM certification is required. Twenty-five percent salary support only is provided; the balance of the salary support must be generated by the incumbent. Qualified applicants may submit a current curriculum vitae and the names of four references who may be contacted to: **Dr. Gerald L. Van Hooser, Jr., Division of Animal Medicine, SB-42, School of Medicine, University of Washington, Seattle, WA 98195.**

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

## POSITIONS OPEN

**MARINE BIOLOGIST.** Nontenure-track. **Assistant professor** fall semester 1987. Ph.D. with interest in field studies. Teach Principles of Biology for nonmajors, upper division classes: marine biology, oceanography, protozoology, marine botany and participation in senior research program. Knowledge of computer applications in teaching and research helpful. Send curriculum vitae, three references, letter stating teaching philosophy to: **Dr. Michael A. Kolitsky, Chair, Biological Sciences, California Lutheran University, Thousand Oaks, CA 91360.** Applications by 13 March for full consideration. *Equal Opportunity Employer.*

**MOLECULAR AND CELLULAR BIOLOGY OF LIPOPROTEINS AND APOPROTEINS.** Applications for a 1- to 3-year postdoctoral appointment are invited from Ph.D. or M.D. graduates who have strong backgrounds in protein biochemistry and/or cellular immunology. Research problem: regulation of early events in lymphocyte activation and proliferation. Stipend: \$16,000 minimum; increases with relevant experience. Send a current curriculum vitae, representative publications, and the names of three references to:

**J. A. K. Harmony, Director**  
Division of Lipoprotein Research  
Department of Pharmacology and Cell Biophysics  
College of Medicine  
University of Cincinnati  
Cincinnati, OH 45267-0575  
Deadline: 1 March 1987.

### MOLECULAR BIOLOGY OF LIPID AND LIPOPROTEIN METABOLISM

The Molecular Resource Center and Department of Pharmacology at the University of Tennessee, Memphis, invites applications for a junior level, **TENURE-TRACK POSITION** focusing on molecular analysis of significant problems in the area of lipid and lipoprotein function and control. Candidates will be expected to develop a strong, independent research program with long-term growth potential, and to participate in teaching of professional and graduate students. The University of Tennessee, Memphis, is in a major growth phase. A large number of new faculty are being appointed in all of the basic science departments. This appointment will be primary in the Department of Pharmacology, but may also be joint with other basic science departments. A large Center of Excellence grant has resulted in development of a Molecular Resource Center featuring state-of-the-art facilities for DNA cloning and sequencing, oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, protein sequencing, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive. Applications will be received until 1 March 1987, or until the position is filled, and should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Dr. Murray Heimberg, Department of Pharmacology, University of Tennessee—Memphis, 874 Union Avenue, Memphis, TN 38163.** *The University of Tennessee is an Equal Opportunity/Affirmative Action Employer.*

Nonprofit public membership organization seeks **MANAGER FOR MEMBERSHIP PROGRAMS.** Person will be responsible for membership growth. Science interest and awareness helpful. Person should be innovative, defining new membership programs. Other duties will include coordination of public events—lectures, meetings, membership recruitment, and public education projects. **The Planetary Society, 65 North Catalina Avenue, Pasadena, CA 99106.**

**MICROBIOLOGIST.** Tenure-track **ASSISTANT PROFESSOR** to begin September 1987. Ph.D. required. Prefer generalist able to supervise M.S. theses and teach freshman biology, genetics, microbiology, and upper level and graduate courses in area of specialization. Send curriculum vitae and salary requirements, and arrange for transcripts of all college work and three letters of recommendation, to: **Dr. Kenneth S. Saladin, Search Committee Chairperson, Department of Biological and Environmental Sciences, Georgia College, Milledgeville, GA 31061.** Application deadline 31 March 1987. *An Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITIONS**  
**DEPARTMENT OF HUMAN GENETICS**  
**VIRGINIA COMMONWEALTH UNIVERSITY**  
**MEDICAL COLLEGE OF VIRGINIA**

**Assistant Professor: (Clinical)** Tenure-track position effective July 1, 1987. Candidate must be a physician with certification in a relevant clinical speciality as well as an advanced degree or post-doctoral training in Human Genetics eligible for certification by the American Board of Medical Genetics. Candidate is expected to assume responsibility for the organization and implementation of the clinical services of the Department as well as to actively participate in the research and graduate, professional and post-doctoral training programs of the Department.

**Assistant Professor: (Quantitative)** Tenure-track position in quantitative genetics, effective July 1, 1987. Candidate should have a Ph.D. and a strong background in Quantitative Genetics with postdoctoral training or demonstrated research experience in human applications. Candidate will be expected to contribute to and enhance an existing research and teaching program in the discipline.

**Assistant Professor: (Biochemistry)** Non tenure-track position, effective July 1, 1987. Should have Ph.D. degree and two years of related postdoctoral experience. The successful candidate will conduct research and contribute to the graduate teaching in Human Nutritional and Biochemical Genetics.

Applicants must submit a complete resume and arrange for three letters of references sent to:

**Dr. Walter E. Nance**  
 Department of Human Genetics  
 Box 33, MCV Station  
 Richmond, VA 23298

*VCU/MCV is an Equal Opportunity/Affirmative Action Employer  
 Women and Minorities are encouraged to apply.*

**ASSISTANT PROFESSOR AND  
 ASSISTANT DIRECTOR  
 CYTOGENETICS LABORATORY**

**DEPARTMENT OF LABORATORY MEDICINE  
 & PATHOLOGY  
 UNIVERSITY OF MINNESOTA**

A tenure track faculty position is available for candidates who hold either an M.D. degree with subspecialty training in Human Genetics or a Ph.D. degree in Human Genetics or closely-related basic science. Candidates must have a minimum of one year of experience in a clinical cytogenetics laboratory, and be Board eligible or certified as a Clinical Cytogeneticist by the American Board of Medical Genetics. Demonstration of research productivity is necessary.

The person in this position will be involved in teaching cytogenetics to physicians in practice, medical students, graduate students, postgraduate residents, postdoctoral fellows, allied health students, and technologists. The individual will be expected to develop an independent, basic or clinical research program in an area of interest to him/her.

The successful candidate will serve as Assistant Director of the Cytogenetics Laboratory, and will assume partial responsibility for the daily operation of this laboratory. Specifically, this individual will be responsible for the supervision and training of technologists analyzing peripheral blood specimens for constitutional abnormalities, and for interpreting the results of these analyses. Expertise in current methodology and development of new techniques for cytogenetic analysis is expected.

Applicants should send curriculum vitae and three letters of recommendation to:

**Harry Orr, Ph.D.**  
 Box 198 UMHC, Dept. of Laboratory Medicine & Pathology  
 420 Delaware Street SE  
 Minneapolis, MN 55455

Deadline for receipt of applications is March 1, 1987. The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

**NATIONAL INSTITUTE ON AGING**

**National Institutes of Health  
 Public Health Service**

The Biomedical Research and Clinical Medicine Program is seeking applicants for the position of Health Scientist Administrator (Biological Sciences) to serve as a program director for the Genetics and Immunology Program, with contributing responsibilities to Cell Biology, Molecular Biology, and Theoretical Biology. Specific responsibilities include developing, managing, coordinating and monitoring a program of research grants, training grants, fellowships and contracts. Applicants should have completed all requirements for a Ph.D. (or equivalent doctoral degree) in the biological or allied health sciences. Additionally, applicants must have experience which clearly demonstrates ability to work independently in planning, organizing, and conducting genetic or immunologic research as well as to administer a research program; demonstrated expertise in some area of molecular genetics is preferred. The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The grade of the position is a GS-13/14 with a salary range of \$38,727-\$59,488 p.a., depending on the qualifications of the applicant selected. Benefits include a retirement plan, health and life insurance, sick and annual leave. Duty Station: Bethesda, Maryland. U.S. citizenship required.

Any applicant not currently employed in the Federal Government as a Health Scientist Administrator will be required to obtain an eligible notice of rating. Submit application for Federal employment (SF-171), curriculum vitae and bibliography to: **Ms. Sara Benesch, Personnel Office, National Institute on Aging, 9000 Rockville Pike, Building 31, Room 2B63, Bethesda, Maryland 20892.** Applications must be received or postmarked by February 28, 1987. Call Ms. Benesch at (301) 496-5347 for further information.

*An Equal Opportunity Employer*

# Last year, we put \$143,024,000 into a few good ideas.

Last year, Syntex invested 17% of sales in R&D, one of the highest ratios in the health sciences industry. And this year, it'll be even higher. That's because we think it's worth spending a few extra dollars for the finest facilities, equipment, and staff to thoroughly research the ideas that will benefit tomorrow's patients. If you'd like to join in this research, consider the following opportunities:

## Inflammation Research

In this position as a Cellular Immunologist in our growing Department of Inflammation Biology, you will be responsible for conducting basic research on immunological mechanisms in animal models of disease. You will work on a team of biologists and biochemists seeking novel approaches to the control of chronic inflammatory diseases. You

must have 2-3 years postdoctoral experience in the immunology of inflammation.

## Postdoctoral Fellow — Pharmacologist

A Postdoctoral Fellow in Renal Pharmacology is needed to study the effects of dopamine analogs and other potential therapeutic agents on renal function. The project will include both acute and chronic studies using several models including the Gellai rat model of insulin and PAH clearance. This position requires a PhD in pharmacology or physiology with specialized coursework in renal and cardiovascular pharmacology.

## Pharmacologist

We are seeking a Cardiovascular Pharmacologist to join our Cardiac and Renal Pharmacology Unit. You will contribute to the design of research

projects and carry out independent assignments for the development of cardiovascular drugs. The position requires a PhD in cardiovascular physiology or pharmacology and 1-3 years relevant laboratory experience. Candidates must possess knowledge of modern techniques for functional evaluation of the cardiovascular system and surgical techniques. Familiarity with computer programming is preferred but not mandatory.

Please send your resume and salary history to Syntex, Professional Staffing, Dept. PS/SCI, 3401 Hillview Avenue, Palo Alto, CA 94304. We are an equal opportunity employer.



*Expect more  
 from Syntex.*

## POSITIONS OPEN

**YEAST/FUNGAL MOLECULAR BIOLOGIST-GENETICIST:** University professorship; tenure-track position with an excellent salary, continuing institutional research support, and new laboratory facilities. Persons with a proven record of research accomplishments and who would qualify for appointment at the associate or full professor rank are encouraged to apply. Applicants should send a statement of their research interests; curriculum vitae and list of publications; and names, addresses, and telephone numbers of three persons who may be contacted as references to: **Yeast/Fungal Search Committee, L. W. Parks, Chairman, Department of Microbiology, Box 7615, North Carolina State University, Raleigh, NC 27695-7615.** Applications will be accepted until 31 March 1987.

*North Carolina State University is an Equal Opportunity Employer.*

**MAMMALIAN TOXICOLOGIST.** Tenure-track assistant professorship available August 1987. Requirements: Ph.D. in toxicology and strong background in research relevant to mammalian toxicology. Duties: develop an active research program based on external funding, teach graduate courses in toxicology, contribute to teaching a biology core course and supervise M.S. graduate research. Preference given to candidates with postdoctoral experience. Send curriculum vitae, transcripts, a brief description of research interests and three letters of recommendation by 2 March 1987 to: **Dr. Douglas Wartzok, Department of Biological Sciences, Indiana University-Purdue University at Fort Wayne, Fort Wayne, IN 46805-1499.** An Affirmative Action/Equal Opportunity Employer.

### MOLECULAR BIOLOGIST ASSISTANT PROFESSOR, TENURE TRACK

**Department of Ophthalmology of the University of Miami School of Medicine** is seeking an individual who will apply recombinant DNA technology to the study of inherited retinal degeneration. The successful candidate is expected to establish an independent research program and be part of an interdisciplinary group of basic and clinical scientists investigating these disorders. Applicants should have a Ph.D. and postdoctoral experience. *The University of Miami is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of three references to: **Dr. S. G. Jacobson, Retinitis Pigmentosa Center, Bascom Palmer Eye Institute, P.O. Box 016880, Miami, FL 33101.**

**MOLECULAR BIOLOGIST:** The Department of Pathology at New York Medical College is accepting applications for two tenure-track positions for molecular biologists to participate in cardiopulmonary research. The areas of interest are confined to the analysis of the organization, modification, regulation and expression of genome and to the analysis of the relationship between protein structure and function using genetic and/or recombinant DNA techniques. Applicants should send their curriculum vitae to:

**Yutaka Kikkawa, M.D.  
Professor and Chairman  
Department of Pathology  
New York Medical College  
Basic Science Building  
Valhalla, NY 10595**

Senior Appointment in **MOLECULAR IMMUNOLOGY.** The Department of Microbiology of the University of Pennsylvania School of Medicine is planning to make a senior tenured appointment of an established scientist in the area of molecular immunology with expertise in protein chemistry. This appointment will involve the development of a research program which will complement existing programs in immunobiology and immunogenetics. The selected candidate will also participate in the educational activities of the medical school and biomedical graduate program. Only applicants with a substantial publication record of significant contributions and a successful record of competitive funding will qualify for consideration. The projected starting date is January 1988. Interested individuals should submit curriculum vitae, bibliography, three or more references, and a statement of future research plans to: **Dr. Fred Karush, Department of Microbiology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6076.**

## POSITIONS OPEN

### MOLECULAR/CELLULAR NEUROBIOLOGIST

Newly formed group working on fundamental issues in olfaction and taste seeks established neurobiologist studying molecular/cellular bases of neural development, organization and/or function. The successful candidate need not have an established background in chemosensory neuroscience, but should indicate how his/her approaches would complement existing research programs. Current programs include developmental chemical neuroanatomy, transplantation, cellular biophysics, cell surface immunology, integrative neurophysiology, and sensory evaluation. Excellent resources exist, including large-scale image analysis system, EM, and tissue culture facilities.

This is a tenure-track position in the Department of Anatomy and Cell Biology and significant space and start-up funds are available. Teaching responsibilities are in team-taught medical neuroscience and graduate neurobiology courses. Appointment at appropriate rank can be made immediately.

Interested candidates should send curriculum vitae, letter of research goals, and the names of four individuals who may be contacted for letters of recommendation to: **M. T. Shipley, Neurobiology Search Committee, Department of Anatomy and Cell Biology, Division of Neurobiology, M.L. #521, University of Cincinnati College of Medicine, Cincinnati, OH 45267.**

### NEUROSCIENCE FACULTY

**The University of California San Francisco (UCSF) Departments of Otolaryngology and Physiology** are searching for a candidate whose primary research interest is in the organization and function of the vertebrate central nervous system for a tenure-track appointment at a junior or senior level. Applicants with a background in human and/or animal studies in the hearing and speech sciences are sought. The successful candidate will conduct an independent research program as well as take part in teaching and in the intellectual life of the Departments and the interdepartmental Neuroscience and Communicative Neurosciences Training Programs. Applications from women and underrepresented minorities are particularly encouraged. Applicants should promptly send curriculum vitae, statement of research interests, and the names and addresses and telephone numbers of three individuals from whom we may solicit letters of recommendation to:

**Dr. Michael M. Merzenich  
Search Committee  
Department of Otolaryngology, HSE-871  
University of California  
San Francisco, CA 94143-0526**

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



**LIFECODES  
CORPORATION**

### NUCLEIC ACID CHEMISTRY DEPARTMENT HEAD

Lifecodes Corporation, a leading company in the use of DNA probes for human genetic diagnostics, is committed to building a strong and innovative Department of Nucleic Acid Chemistry. To that end we are seeking a Department Head, a senior individual with a proven record of creativity and group management capability. A broad background in nucleic acid chemistry is essential while experience with the development of non-isotopic labeling systems for DNA is a plus.

For the right individual we offer an extremely attractive salary/benefits package, an exciting work environment, and excellent research facilities located just 30 minutes from New York City in Westchester County.

If interested, please send your curriculum vitae with the name and telephone number of three references to:

**Jeffrey Glassberg, Ph.D.  
Lifecodes Corporation  
4 Westchester Plaza  
New York, NY 10523**

## POSITIONS OPEN

**PLANT BIOLOGIST.** Assistant Professor. Tenure track, beginning fall 1987. Ph.D. in vascular plant taxonomy; postdoctoral training; strong teaching/research interests; knowledge of analytical techniques. Duties include teaching introductory botany, plant taxonomy, and plant ecology; graduate student supervision; curating the herbarium; and development of independent research.

Applicants should submit a curriculum vitae, statement of professional interests, and names of three references by 1 March 1987 to: **Daniel Stern, Chair, Biology Department, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110.**

*An Equal Opportunity/Affirmative Action Employer.*

### PLANT SCIENCE INTERN

**WEYERHAEUSER CO.** needs a Ph.D. in woody plant physiology or plant science to conduct original research on physiological aspects of transport of chemical preservatives in plants. You will participate as a strong team member in a new specialty plant business on a temporary 12- to 18-month assignment, in Auburn, Washington (near Tacoma). There is a possibility of full-time employment based on the success of the business. If assignment does not continue relocation compensation will be provided.

You must have (i) knowledge and experience in aspects of xylem transport, cell and tissue water relations and stomatal physiology, (ii) commitment to high quality, well-disciplined research, (iii) excellent written and oral communication skills—especially to prepare reports and give effective presentations of technical material to non-technical people, (iv) experience in experimental design and statistics, (v) ability to work unsupervised in unstructured rapidly changing mission environment.

Send résumé with cover letter and list of three professional references, with addresses and phone numbers, by 27 February 1987, to:

**Weyerhaeuser Company  
WTC-TR1-PSI  
Tacoma, WA 98477**

**POSTDOCTORAL ASSOCIATE** position available immediately to study kinesin's role in proteolytic enzyme secretion in metastatic human tumor cells. Applicants should have a biochemical background and experience in immunocytochemistry, tissue culture and microinjection techniques would be helpful. The position is funded for 2 years and may be extended. Salary: \$19,900 to \$24,000. Respond to: **Dr. Mark E. Stearns, 215-728-3141 at the Fox Chase Cancer Center, Central and Shelmire Avenues, Philadelphia, PA 19111.**

**POSTDOCTORAL ASSOCIATE** position available 1 July 1987 for research into polyamine metabolism in plants. Experience in plant biochemistry is essential and in molecular biology is desired. Salary competitive. Send letter of application, curriculum vitae, and list of references to:

**Leonard H. Weinstein, Ph.D.  
Boyce Thompson Institute at Cornell University  
Tower Road  
Ithaca, NY 14853**

### POSTDOCTORAL ASSOCIATE YALE UNIVERSITY SCHOOL OF MEDICINE

Needed in summer/fall to study neocortical model of epilepsy (**Drs. A. Chatt and J. Ebersole**). Successful candidate will demonstrate experience in either electrophysiology (in vivo/in vitro) or anatomical tract-tracing techniques and be willing to train in the other. Two-year appointment will be concurrent with a position in the VA Medical Center. Send curriculum vitae, three letters of reference, and reprints to:

**Dr. Allen B. Chatt  
Department of Neurology  
Yale University School of Medicine  
New Haven, CT 06510**

**POSTDOCTORAL POSITION** available immediately to study immune regulation in autoimmunity. Experience in molecular biology is preferred along with interest in immunology and neurobiology. Project will examine idiopathic network interactions in myasthenia gravis and will involve immunoglobulin gene sequencing. Send curriculum vitae and names of references to: **Dr. Donard S. Dwyer, Neurosciences Program, University of Alabama at Birmingham, Birmingham, AL 35294.** An Equal Opportunity/Affirmative Action Employer.

## Pharmacologists Drug Discovery

We are a subsidiary of ICI Pharmaceuticals, a world leader, part of one of the largest chemical firms in the world. Expansion of research programs has created these openings at our state-of-the-art laboratories.

### MOLECULAR CELL BIOLOGY

A new group within Pharmacology, part of a multidisciplinary team to contribute to basic research toward identification of new therapeutic entities.

• **Senior Staff Position**— Ph.D. in biochemistry (neurochemist) or cell biology with 3-5 years of proven competence in the biochemistry affecting calcium mobilization and the pharmacology of calcium channel blockers. Practical expertise in receptor biochemistry, second messenger assays, and state-of-the-art cell culture techniques are essential.

The successful candidate will be responsible for a group comprising a postdoctoral fellow and appropriate assistants.

• **Postdoctoral Fellow**— Ph.D. in biochemistry or neurochemistry with hands-on experience with second messengers and mechanism of signal transduction. Experience for measuring calcium fluxes, receptor function, and tissue culture techniques are highly desirable. One to two year appointment renewable by mutual consent. Presentation at national and international meetings and publication of findings will be encouraged.

• **Junior Pharmacologists**— Several B.S. or M.S. positions in biology or biochemistry with experience in neurobiology or cell biology to work on receptor binding techniques, catecholamine metabolism, and mechanism of cellular function. Familiarity with HPLC, tissue culture techniques is desirable.

### CNS

• **Neurophysiologist**— B.S./M.S. in Neurobiology with experience in Neurophysiology. Assist in design and execution of pharmacological studies to identify drugs for central nervous system disorders. Proficient in electrophysiological techniques (stereotaxic surgery, histology, extracellular single unit recording, iontophoresis, brain slice). Knowledge of electronics and computer science.

### PULMONARY

• **Enzymologist/Biochemist**— Ph.D. with 2-3 years postdoctoral expertise with sound understanding of enzyme kinetics. Will interact with team of biologists and chemists to design and analyze mechanism of action inhibitors of human neutrophil elastase. Mechanistic studies on other enzymes anticipated. Broad background in biochemistry expected.

### RENAL

• **Pharmacologist**— B.S. or M.S. with basic foundation in renal physiology/pharmacology with 2-3 years in micro-puncture and microanalytical techniques. Hands-on experience in animal surgery necessary.

Superb facilities in suburban setting 25 miles south of Philadelphia. Competitive salary and comprehensive benefits, including unique investment plan. Principals only. **Charles T. Brodigan**, Associate Employment Manager.



**Stuart  
Pharmaceuticals**

A Division of ICI Americas Inc.  
Wilmington, DE 19897

An Equal Opportunity Employer, M/F

# CLINICAL RESEARCH

## Gastroenterology & Rheumatology

The Medical Products Division of Pharmacia Inc. has two openings in their Clinical Research Department.

## SR. CLINICAL RESEARCH ASSOCIATE

This position oversees the progress and analyzes the results of clinical trials, helps in NDA preparation and monitors adverse drug reactions. Excellent oral and written communication skills and a BS in the Life Sciences are required. An advanced degree is preferred. Experience should include 2-5 years' in clinical research in a Pharmaceutical environment.

## CLINICAL RESEARCH ASSOCIATE

The responsibilities of this position include monitoring and data management of clinical trials through on site contact with clinical investigators, design of protocols, and writing of final medical reports. A BS in Life Science and 1 + years experience as a CRA are required as are excellent written and oral communication skills.

We offer excellent company paid benefits and a salary commensurate with experience. For consideration for these positions apply to: **HUMAN RESOURCES DEPARTMENT, PHARMACIA INC., 800 CENTENNIAL AVENUE, PISCATAWAY, NEW JERSEY 08855.** We are an equal opportunity employer M/F/H/V. (201) 457-8175.



**Pharmacia**

## Research Scientists

We're Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines. Establish yourself with a leader in the field as one of the following:

### Manager of Serological Studies

You will manage a group of professionals in the development of immunological assays, as well as supervise the routine use of assays in clinical and preclinical studies. Qualifications must include a PhD in Immunochimistry or equivalent, and a minimum 5 years related experience. Assay development experience is essential.

### Cell Culture Biologist

You will develop hybridoma cultures and cell culture assays, as well as characterize, evaluate and produce monoclonal antibodies. Qualifications must include at least an MS (PhD preferred) in Immunobiology, Cell Biology or equivalent, and a minimum 2 years research experience. Supervisory background desirable.

For prompt, fully confidential consideration, please send your resume with salary requirements to: **Praxis Biologics, Human Resources Department, 300 East River Road, Rochester, NY 14623.**

**PRAXIS  
BIOLOGICS**

An equal opportunity employer, m/f.

## POSITIONS OPEN

**POSTDOCTORAL FELLOW**—Position available immediately for individual with Ph.D. or D.Sc. in biochemistry. Experience in the molecular biology of gene isolation and characterization as well as in biochemical and ultrastructural aspects of invertebrate collagen biosynthesis is essential. Applicants must be experienced in cell isolation and propagation and in all contemporary methods of molecular biology, cell biology and electron microscopy. Salary is \$20,000. Applicants must send a complete curriculum vitae and bibliography to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109. Refer to Job Order # 2559504. An Affirmative Action/Equal Opportunity Employer M/F/H/V.**

## POSTDOCTORAL POSITION

Research position in molecular biology at the postdoctoral level is available immediately to study the transcriptional control of gene expression in eukaryotic system. The candidate should be a recent Ph.D. in molecular biology/biochemistry/biophysics or in any related area of Life Science and must have knowledge in Nucleic Acid Biochemistry. Background in recombinant DNA techniques or in microbiology is preferable but not essential. Please send curriculum vitae with the names of three references to:

**Dr. G. C. Das**  
Department of Molecular Biology  
The University of Texas Health Center at Tyler  
P.O. Box 2003  
Tyler, TX 75710

**POSTDOCTORAL POSITION** available June 1987, to study hormonal regulation of expression of urea cycle enzyme genes. Experience with recombinant DNA technology desirable. Send curriculum vitae, a statement of research interests, and names of three references to: **Dr. Sidney Morris, Department of Microbiology, Biochemistry, and Molecular Biology, University of Pittsburgh, Pittsburgh, PA 15261. Equal Opportunity/Affirmative Action Employer.**

## POSTDOCTORAL POSITION

The Department of Biology announces a teaching-research postdoctoral position available 1 July 1987 (one year). The successful applicant will be expected to teach a one-semester undergraduate course, with the remaining time devoted to research. Applicant's research interests should be in one of the following areas: physiological, population, community ecology and evolutionary biology of plants, animals and microbes; paleoecology, paleobiology, developmental microbiology and population genetics. Applicants should submit a description of research interests and arrange for three letters of recommendation to be sent to: **Dr. Walter A. Konetzka, Department of Biology, Indiana University, Bloomington, IN 47405.** Candidates whose applications are received prior to 1 May 1987 will be assured of consideration. *Applications from women and minority group members are especially welcome. Indiana University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION AT CASE WESTERN RESERVE UNIVERSITY.** A recent Ph.D. with experience in enzyme purification and characterization, enzyme kinetics, HPLC, and immunochemical methods is sought. Background in molecular biology is helpful but not essential. The incumbent will study a newly discovered multi-functional protein, Aminoacidic Semialdehyde Synthase [Markovitz *et al.*, *JBC* 259, 11643 (1984)]. The enzyme catalyzes the first two sequential steps in the lysine degradative pathway in liver. The investigation will be at both protein and gene levels. Send curriculum vitae with names of three references to: **Dr. David T. Chuang, Department of Medicine (151-W), VA Medical Center, 10701 East Boulevard, Cleveland, OH 44106.**

**POSTDOCTORAL POSITION, BOSTON UNIVERSITY.** Position available for 1 April 1987 for Ph.D. in lipid biochemistry laboratory. Studies will focus on the interaction of cholesterol and lecithins in lipoproteins and cholesterol transport between lipoproteins and cells. Minimum duration 2 years. Salary: \$21,000. Send curriculum vitae and three letters of recommendation to: **Dr. Sander Robins, Room B-8, Research Building, Boston Veterans Administration Medical Center, Boston, MA 02130. Equal Opportunity Employer. M/F**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** to study (a) mechanisms of enzyme subcellular localization using microsomal  $\beta$ -glucuronidase-cgavn as a model system [*JBC* 260, 15802 (1985)] and/or (b) inherited bleeding disorders in mice with platelet dysfunction [*Blood* 66, 1196 (1985)]. Genetic, biochemical, and molecular approaches. Available 1 April 1987. Send curriculum vitae and three references to: **Dr. Richard T. Swank, Department of Molecular and Cellular Biology, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION IN X-RAY HOLOGRAPHY**—Applications are invited for a postdoctoral position in the Center for X-Ray Optics at the University of California's Lawrence Berkeley Laboratory. The 2-year position will be for research in x-ray holographic microscopy, under the direction of **Dr. M. R. Howells.** Candidates must be familiar with such instrumentation as electron microscopes, computer interfaces and digital image processing systems and have the ability to develop advanced instrumentation. Requires relevant experience in the extraction of useful information from x-ray holograms recorded on high resolution resist. Expertise in information theory, Fourier optics, polymer physics, and signal processing desirable.

To apply, please send two copies of résumé to: **Lawrence Berkeley Laboratory, 1 Cyclotron Road, Employment Office 90-1042, Berkeley, CA 94720. Refer to Job #A/3992. Filing deadline: 31 March 1987. An Equal Opportunity Employer M/F/H/V.**

## LAWRENCE BERKELEY LABORATORY

**POSTDOCTORAL POSITION** available immediately for studies on use of immobilized antibodies and antibody fragments in toxicology. Project involves antibody production and purification. Background in biochemistry, immunochemistry or toxicology desired. Applicants should send their curriculum vitae and the names of three references to: **Douglas E. Rollins, M.D., Ph.D., Director, 801-581-5117, Center For Human Toxicology, 38 Skaggs Hall, University of Utah, Salt Lake City, UT 84112. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available for 2 years beginning summer 1987 or earlier to study the neuroendocrine regulation of pulsatile luteinizing hormone release during the estrous cycle and pregnancy in the rat. Applicants should have experience in reproductive neuroendocrinology; expertise in HPLC measurement of neurotransmitters desirable but not essential. Methods used include CNS push-pull perfusion, radioimmunoassay (LH, LHRH, steroids), and HPLC. Please send résumé, brief statement of research interests, and three letters of reference to: **Robert Gallo, University of Connecticut, Department of Physiology and Neurobiology, Box U-42, Room TLS-416, 75 North Eagleville Road, Storrs, CT 06268. We are an Equal Opportunity/Affirmative Action Employer. (Search #7A268)**

## THE UNIVERSITY OF CONNECTICUT

## POSTDOCTORAL POSITION UNIVERSITY OF PENNSYLVANIA

Applications are invited for a postdoctoral position to carry out theoretical studies of lattice defects in intermetallic compounds. The work involves computer simulation of the structures and properties of antiphase boundaries, stacking faults, dislocations and grain boundaries using molecular statics and dynamics. An integral part of this research is the development of methods of total energy calculations employing the embedded atom, tight-binding, linearized muffin tin orbitals as well as density functional theory methods. Qualifications: Ph.D. in physics or materials science. Starting date as early as convenient. Appointment is originally for 1 year with the possibility of extension for another year. Send résumé and two references to: **Professor V. Vitek, Department of Materials Science and Engineering, University of Pennsylvania, Philadelphia, PA 19104. University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study PAF and other inflammatory mediators in airway hyperreactivity in asthma. Recent Ph.D. in pharmacology or biochemistry needed with experience in PI turnover, protein kinases and receptors. Send curriculum vitae and three letters of reference to: **Robert G. Townley, M.D., Director, Allergic Disease Center, Creighton University School of Medicine, Omaha, NE 68178.**

**POSTDOCTORAL POSITION** available immediately for Ph.D. in biochemistry. The dynamic pharmaceutical research group of a multinational company is seeking a highly motivated postdoctoral scientist to work on protein purification and characterization of protein pharmaceuticals. This position will involve collaboration with both academic groups and leading pharmaceutical companies. Preference will be given to candidates who have expertise in protein purification, modification and characterization. Please forward your curriculum vitae and three references to: **Dr. Geoffrey Henson, Pharmaceutical Research, Johnson Matthey, Inc., 1401 King Road, West Chester, PA 19380. We are an Equal Opportunity Employer, M/F/H/V.**

**POSTDOCTORAL POSITION** available immediately for a scientist with experience in recombinant DNA techniques to participate in cloning and sequencing, and study of the expression, of genes coding for DNA restriction endonucleases and modification methylases. Knowledge of French would be an asset. Initial appointment for 1 year; may be renewed. Salary \$24,000 Canadian. Send curriculum vitae and names of three referees by 1 March 1987 to: **Dr. Paul H. Roy, Infectious Disease Service, Laval University Hospital Center, Ste-Foy, Québec, G1V 4G2, Canada.**

**POSTDOCTORAL POSITION** available now to study protein and peptide folding, structure prediction, and design. Methods involve computer programming, Raman spectroscopy. Write: **Dr. Robert Williams, Department of Biochemistry, Uniformed Services University of Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITIONS.** The Department of Microbiology at the Kansas University Medical Center has available eight positions at the postdoctoral level beginning in the spring of 1987. Applicants should possess a Ph.D., M.D. or equivalent and should be committed to excellence in research. Specific areas of research for these positions include:

**Molecular Immunology**—Three positions are available to characterize receptors on immunologically relevant cells, biochemical mechanisms of signal transduction, and cloning and expression of genes encoding membrane receptors (**D. Morrison, Ph.D., and T. Suzuki, M.D., Ph.D.**).

**Molecular Virology**—Two positions are available to employ biochemical and molecular immunological approaches to study poliovirus-mediated cleavage of cap-binding complex p220, and expression of herpesvirus glycoproteins in viral pathogenesis (**D. Etchison, Ph.D., B. Narayanaswamy, Ph.D.**).

**Prokaryotic Molecular Genetics**—One position is available to study the molecular mechanisms regulating cell division, with emphasis on the role of the *ftsZ* gene (**J. Lutkenhaus, Ph.D.**).

**Cellular Immunology**—One position is available in the area of microbial immunity and lymphokine production in cloned lymphocyte subpopulations (**M. Parmely, Ph.D.**).

**Biophysics**—One position is available to study protein sorting into microbodies of phagocytosing cells and cells of lower eukaryotes (**M. Fiskin, Ph.D.**).

Most appointments will be initially for a period of 1 year but may readily be extended to 2 or 3 years upon mutual agreement. This is an opportunity to join a dynamic growing Department of Microbiology with strong NIH research support. Interested individuals should send curriculum vitae including a statement of research interests and accomplishments, a list of publications, and the names of three individuals who would provide letters of reference to: **David C. Morrison, Ph.D., Chairman, Department of Microbiology, Kansas University Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103. The University of Kansas is an Affirmative Action/Equal Opportunity Employer.**



## Goddard Space Flight Center

SEEKS A

### DIRECTOR OF SPACE AND EARTH SCIENCES

Scientific leader of NASA's largest Space Science organization

#### 750 scientists and engineers

##### 6 Laboratories

Laboratory for Atmospheres  
Laboratory for Terrestrial Physics  
Laboratory for High Energy Astrophysics  
Laboratory for Oceans  
Laboratory for Astronomy and Solar Physics  
Laboratory for Extraterrestrial Physics

##### Goddard Institute for Space Studies (New York)

##### 2 Divisions

Space Data and Computing Division  
Administration and Resources Management Division

##### 2 Project Management Offices

Crustal Dynamics Project  
Orbiting Satellites Project

Reporting to the Director, Goddard Space Flight Center, the position is in the Senior Executive Service; salary range is \$61,296-72,300, depending upon qualifications.

Candidates must have a Ph.D. or equivalent education or experience, and a research background in space and/or earth sciences including a substantial record of publications and/or significant responsibility for guidance of the scientific content of major programs in the space and/or earth sciences. Candidates must have demonstrated an ability to provide interdisciplinary program leadership, and to direct and participate in programs and projects in a broad spectrum of theoretical and experimental research in the space and/or earth sciences. A familiarity with the content, objectives and purposes of NASA's scientific program is highly desirable.

A Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), should be sent to **NASA/Goddard Space Flight Center, Attention: Ms. Arletta Love, Code 221, Greenbelt, Md. 20771**. Applications will be accepted through March 31, 1987.

For further information and application forms, please call 301-286-8319 (Ms. Arletta Love)

**NASA**

U.S. CITIZENSHIP REQUIRED  
AN EQUAL OPPORTUNITY EMPLOYER

**GSFC**



## DIRECTOR

### Monterey Bay Research Institute

The Board of Trustees of the Monterey Bay Aquarium Foundation requests nominations and applications for an outstanding *Director* for the newly founded *Monterey Bay Research Institute* to be located in Monterey, California, independent of but closely associated with the Monterey Bay Aquarium. The Institute will be housed in new facilities which the Director will help to design and will have a guaranteed operating budget of \$2 million per year.

The goals of the Institute will be to create a premier program of marine research based upon the unique opportunities offered by the diverse marine environments of Monterey Bay, its submarine canyon, and the contiguous ocean waters. The Institute will emphasize interdisciplinary approaches centered on biology, but also involving geological, physical and chemical oceanographic studies. It will foster research that focuses on variability through time as well as in space, on time scales ranging from diurnal to decadal. It will encourage advances in research through support and development of new technology and instrumentation. The Institute will be committed to education, through University affiliations, through training of postdoctoral scholars, and through association with the public education mission of the Monterey Bay Aquarium.

The Director must be a distinguished scientist of international reputation with broad interests related to life in the sea and its relations to physical, chemical, and geological processes. The Director should be a "modern naturalist" with experience in contemporary experimental science and field work as well as an appreciation for the development of technologies for furthering such research.

The Director will be charged with the development and management of the Institute in addition to continuing his/her own research program. The Director will have the assistance of an advisory board consisting of eminent scientists and engineers. The appointment as Director is for five years, and will be renewable or continued as a senior research position in the Institute.

Send requests for further information, nominations, or letters of interest with curriculum vitae and names of four references to:

Search Committee  
MONTEREY BAY AQUARIUM FOUNDATION  
886 Cannery Row  
Monterey, CA 93940

Nominations and applications will be accepted until March 1, 1987.



# You can make a difference !

## FDA SEEKS A TOP PHYSICIAN AS DIRECTOR CENTER FOR DRUGS AND BIOLOGICS

The Food and Drug Administration invites applications for the position of Director, Center for Drugs and Biologics. The Director is responsible for planning and directing the Agency's scientific and regulatory programs which are designed to develop and implement National standards and regulations for human drugs, biologicals and blood and blood products. This is a Civil Service position in the Senior Executive Service with a salary range of \$63,135 to \$70,800 per year. The physician selected will also be eligible for Physician's Comparability pay up to an additional \$10,000 per year, making the total compensation package worth \$80,800 plus benefits.

This is an exciting and challenging opportunity for a physician who has worked professionally in the field of human drugs, and/or biologicals and blood and blood products and has the executive qualifications necessary to lead and direct over 1,400 medical, scientific, and allied professionals.

The individual selected will have considerable influence in shaping the nation's pharmaceutical review program. It provides an unparalleled opportunity to someone who believes it vital to bring needed new pharmaceutical products to market as quickly as possible.

This position may also be filled by those who join the Commissioned Corps of the U.S. Public Health Service, or by current or former Commissioned Officers. The salary ranges from \$66,000 up, depending on qualifications and length of service.

If interested, a curriculum vitae should be sent to the Division of Human Resources Management (HFA-408), Food and Drug Administration, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857. For further information, please call Jeylene Wood collect on (301) 443-1755. To ensure full consideration, applications must be postmarked no later than February 27, 1987.

**Food and Drug Administration**  
An Equal Opportunity Employer

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available after 1 April 1987 to study DNA damage/repair and cellular stress responses in human tumor cells treated with anticancer drugs that alkylate and cross-link DNA. Salary range: \$17,000 to \$21,000. Send résumé, summary of research interests/experience and have three reference letters forwarded to: **Dr. J. Seidenfeld, The Cancer Center Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available to study mechanisms for signal transduction by polypeptide growth factors and regulation of muscle-specific gene expression during mammalian muscle differentiation. Experience in molecular biology is preferred but not essential. Send curriculum vitae and names of three references to: **Dr. Eric N. Olson, Department of Biochemistry and Molecular Biology, M. D. Anderson and Tumor Institute, University of Texas System Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITIONS** available immediately to work in the areas of genetic basis of carcinogenesis and comparative gene mapping. Use is made of somatic cell genetics and molecular biology techniques. Candidates should have a Ph.D. in cellular biology, biochemistry, or genetics, with experience in recombinant DNA technology.

The Institute for Medical Research is a private, not-for-profit basic medical research institute located in southwestern Vermont with easy access to Albany, NY, New York City, and Boston, MA.

Send curriculum vitae and the names and addresses of three references to: **Dr. Peter A. Lalley, Director, Institute for Medical Research, 110 Hospital Drive, Bennington, VT 05201. The Institute is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITIONS** available immediately for three neurobiologists interested in development and regeneration. Research involves intermediate filament and extracellular matrix proteins. Experience in protein chemistry, tissue culture, or electron microscopy desirable. Training opportunities in immunohistology. Salary range: \$18,000 to \$26,000 depending on experience. Please send curriculum vitae to:

**Dr. Amico Bignami  
Department of Pathology  
Harvard Medical School, and  
Spinal Cord Injury Research  
West Roxbury, VA Medical Center  
Boston, MA 02132**

**POSTDOCTORAL POSITIONS, PROTEIN ENGINEERING.** Two positions using directed mutagenesis to study protein structure/function relationships; one will examine the details of fibrinogen critical to thrombin recognition and fibrin polymerization; another will probe the basis for the multiple functions of thrombin. A background in protein chemistry, purification, or expression is desired. Send résumé and names of references to: **Drs. S. Lord or D. Fowlkes, Program in Molecular Biology and Biotechnology, 217H, University of North Carolina, Chapel Hill, NC 27514. An Affirmative Action/Equal Opportunity Employer.**

**Cedars-Sinai Medical Center (CSMC)** is currently recruiting qualified personnel to staff their **Research-Biochemistry Department**. CSMC is an ultramodern 1120-bed acute care facility, with many special projects. Situated adjacent to Beverly Hills and West Hollywood in Los Angeles, CA, CSMC provides a progressive work environment, opportunity for advancement, competitive salaries and benefits to all employees.

**POSTDOCTORAL POSITION AS RESEARCH FELLOW** available immediately for 2 years in areas of pathways of glycogen synthesis, carbohydrate metabolism in vivo and in vitro, and effects of hormones and alcohol. Requires Ph.D. in biochemistry or physiology. Send current curriculum vitae to/or contact:

**Cheryl Kostelnik  
Cedars-Sinai Medical Center  
8700 Beverly Boulevard  
Brown, First Floor,  
Los Angeles, CA 90048  
Telephone: 213-855-5510**

## POSITIONS OPEN

**POSTDOCTORAL POSITION—ION CHANNELS.** Available in 1987 for studies of the molecular interactions of toxins with voltage-dependent Na- and K-channels. In a current project we are developing a new class of scorpion peptides specific for K-channels as biochemical probes. Methods include radioligand binding, HPLC and single-channel analysis of ion channels incorporated into artificial lipid bilayers. Recent Ph.D.s in related areas of biochemistry and biophysics are invited to send curriculum vitae and references to: **Dr. Edward Moczydlowski, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study the molecular biology and structure/function of the lymphocyte Fc receptor for IgE. Experience in molecular biology and membrane biochemistry highly desirable. Submit curriculum vitae and two letters of recommendation to: **Dr. Daniel H. Conrad, Subdepartment of Immunology, Johns Hopkins University, 725 North Wolfe Street, Baltimore, MD 21205. Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATES

Positions for NCI postdoctoral training program in molecular and cellular mechanisms of carcinogenesis are available at The University of Texas System Cancer Center—Science Park. Research programs focus on the following areas: somatic cell genetics. DNA repair and mutagenesis, carcinogen metabolism and adduct formation, tumor promotion, mechanisms of lymphomagenesis, normal and tumor cell differentiation, biochemical genetics, growth factors. Current approaches in whole animal and in vitro culture systems include: flow cytometry (BD FACS 440), HPLC, monoclonal antibody production, Southern blot analysis and DNA sequencing, isoenzyme analyses and electron microscopy. Applicants must be U.S. citizens or permanent residents and have a Ph.D., M.D., or D.V.M. degree. For application forms contact: **Dr. Thomas J. Slaga, Director, UTSCC, Science Park—Research Division, P.O. Box 389, Smithville, TX 78957. Telephone: 512-237-2403. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL RESEARCH ON CONNECTIVE TISSUE

The Joint Diseases Laboratory, Shriners Hospital, Montreal has vacancies in the following areas: (i) autoimmunity to cartilage proteoglycan in ankylosing spondylitis in man and mice (Shriners Funded); (ii) studies of proteoglycan and collagen in human chondrosarcomas (NIH funded, in collaboration with **Dr. D. Rimoin**, Los Angeles); (iii) studies of interleukin-1 induced proteins in human synovial cells and fibroblasts (Shriners Funded); (iv) enzymology and molecular biology of cysteine proteinases and their inhibitors (Shriners Funded). These are all ongoing studies in a large very well-equipped research group specializing in studies of connective tissues in health and disease. Applicants for research covered by (i) and (ii) should write to **Dr. A. R. Poole** (Director), those for area (iii) should contact **Dr. Elaine Golds** and those for area (iv) should contact **Dr. J. S. Mort** at the address shown below:

**Joint Diseases Laboratory  
Shriners Hospital, McGill University  
1529 Cedar Avenue  
Montreal, Quebec, H3G 1A6  
Canada**

### POSTDOCTORAL RESEARCH POSITION GASTROINTESTINAL ONCOLOGY

Three-year position available immediately to Ph.D. in biochemistry, cell biology, or molecular biology to study new cancer chemopreventative agents with focus on gastrointestinal cancer. Applicants should have knowledge of animal models for carcinogenesis. Send curriculum vitae and names of three references to: **Dr. Michael J. Wargovich, Section of Gastrointestinal Oncology and Digestive Diseases, Box 68, M. D. Anderson Hospital and Tumor Institute, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORATE 2D NMR**—To solve the solution structure of small (MW 6,000–10,000) proteins involved in blood coagulation phenomena. Facilities include Bruker 500, MSL 300, several 200, 300 MHz. Candidate should have experience in NMR of macromolecules. Available 1 March 1987. Please submit curriculum vitae, reprints, and three to four references to: **Professor L. J. Berliner, Department of Chemistry, Ohio State University, 120 West 18th Avenue, Columbus, OH 43210; telephone: 614-292-0134.**

### RESEARCH ASSISTANT

Assistant in biopsychological research (data acquisition and analysis, computerized experimentation involving human and animal subjects). Minimum qualifications: earned B.A. in biopsychology or related field, research experience. Starting salary \$20,328. Send résumé to: **Hunter College, Box 293, 695 Park Avenue, New York, NY 10021. Equal Opportunity Employer.**

**RESEARCH ASSISTANT PROFESSOR** to participate in teaching dental and graduate students and to study the mechanisms of induction and regulation of IgA responses to microbial vaccines in mice, rats, and humans. Requires experience in cellular and humoral immunology, hybridoma technology, and general immunological techniques. Will be expected to initiate studies on host factors influencing collagen degradation and subsequent periodontal disease. Position available now to a D.D.S. with related research experience. Starting salary will be \$33,072 per year. Send curriculum vitae and three references by 15 March 1987 to: **Dr. S. M. Michalek, Department of Microbiology, University of Alabama at Birmingham, University Station, Birmingham, AL 35294. An Equal Opportunity Employer/Affirmative Action Employer.**

**RESEARCH ASSOCIATE (Ph.D.) and RESEARCH ASSISTANT (B.S. or M.S.)** openings available immediately for work on gene transfer involving antisense RNA in mammalian cells. Documented experience in DNA cloning and sequencing required, experience in gene transfer or tissue culture and background in immunology desirable. Apply with curriculum vitae and names of three referees before 20 February 1987 to: **Dr. D. W. Bullock, Department of Cell Biology, Baylor College of Medicine, Houston, TX 77030. An Equal Opportunity Employer.**

**RESEARCH ASSOCIATE** skilled in cell and molecular biology with postdoc experience. Ph.D. required. Candidates must be expert with the following methods: tissue culture, histology, cell-free translation, immunoprecipitation, electrophoresis, HPLC, glycoprotein processing, protein and carbohydrate chemistry. Salary \$23,000. Address inquiries to: **Dr. Irving Boime, Department of Pharmacology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110. Equal Opportunity Employer.**

### EMORY UNIVERSITY DEPARTMENT OF PHYSICS

**RESEARCH ASSOCIATE** position in biophysics is available on or after 1 June 1987. One year with renewal possible. The research involves Mössbauer and EPR studies on metalloproteins; will have opportunity to interact with chemistry and biochemistry research groups. Recent doctorates in physics, biophysics, or physical biochemistry are invited to apply. Experience in Mössbauer spectroscopy and in electronics is desirable.

Send curriculum vitae and names of three references to: **Dr. B. H. Huynh, Physics Department, Emory University, Atlanta, GA 30322. Emory University is an Affirmative Action/Equal Opportunity Employer.**

### RESEARCH ASSOCIATE OR POSTDOCTORAL POSITIONS UNIVERSITY OF SOUTHERN CALIFORNIA

Two research associate or postdoctoral positions are available immediately. One position in molecular biology to study the gene expression of neuronal proteins; one in protein chemistry to study the primary structure of membrane proteins. Submit curriculum vitae and names of three references to: **Jean Shih, Ph.D., Professor of Neurobiology, Pharmaceutical Sciences Center, 1985 Zonal Avenue, Los Angeles, CA 90033-1086. Equal Opportunity Employer M/F/H.**

## BIOANALYTICAL CHEMIST

The Safety Assessment Department of Merck Sharp & Dohme Research Laboratories in West Point, Pennsylvania is seeking a bioanalytical chemist experienced in HPLC, GLC, and RIA. Primary responsibilities include methodology development for the analysis of drugs, metabolites, and endogenous biochemical markers in biological systems leading to an understanding of organ toxicity mechanisms and species differences in toxicity.

The successful candidate will have: a Ph.D. in analytical chemistry, biochemical toxicology, or biochemistry, or the equivalent; 2-4 years of relevant laboratory experience in bioanalytical chemistry; and, demonstrated experience in the analysis of drugs and xenobiotics using HPLC, GLC, and radiometric techniques.

MSDRL is a world leader in pharmaceutical research and development offering an excellent work environment and outstanding salary, benefits, and relocation packages.

Forward your c.v. to: Mr. Charles F. Hawkins,

**Merck Sharp & Dohme  
Research Laboratories**  
West Point, PA 19486

Equal Opportunity Employer, M/F



**Merck & Co., Inc.**

**MicroGeneSys, Inc.** is a biopharmaceutical company utilizing advanced gene expression technology for the production of a variety of vaccine products.

## Protein Biochemist

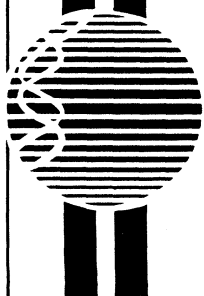
Expansion of MicroGeneSys' research and development efforts has created a need for a protein chemist with a Ph.D. in Biochemistry, a minimum of 2 years postdoctoral experience and an exceptional level of expertise in purification and characterization (including sequencing) of natural and recombinant proteins. A strong research effort will be expected, with an emphasis on the preparation of biologically active proteins for clinical trials and commercial development as vaccines.

**MicroGeneSys, Inc.** offers a stimulating scientific environment, competitive salaries and benefits, and equity participation. The company's south-central Connecticut location offers a variety of recreational and cultural opportunities, as well as convenient access to major metropolitan centers. Qualified candidates should submit a resume and list of references (in confidence) to the **Personnel Director**.

**MicroGeneSys, Inc.**  
BIOPHARMACEUTICALS

**400 Frontage Road  
West Haven, CT U.S.A.  
06516-4147  
(203) 932-3203**

An Equal Opportunity Employer



## Senior Research Biologist

## Molecular Biologist

The Agricultural Research Division of American Cyanamid Company has the following opportunities immediately available.

### Senior Research Biologist

This opening in the Department of Animal Industry Discovery and Biotechnology involves responsibility for planning, establishing, and executing a research program aimed at identifying immunological methods of modifying hormone activity towards enhancing animal productivity.

Applications are sought from candidates with a Ph.D. in biochemistry/endocrinology and experience in monoclonal antibody techniques, peptide immunology, and antigenic structure predication. A knowledge of protein biochemistry and the hormonal control of animal production would be an advantage, as would some experience with DNA cloning and sequencing.

### Molecular Biologist

This opening in the Plant Biotechnology Group calls for an individual at the B.S. or M.S. level with research experience in molecular biology. 1-5 years' research experience in using the basic techniques of molecular biology (DNA sequencing, genomic libraries, expression vectors, etc.) is required. Experience with plant systems is desirable, but not essential. The successful candidate will work with a Senior Research Scientist to develop and plan experiments, working on specific programs with considerable independence.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, forward your resume, an outline of research interests, career goals and the names and addresses of three references to the Employment Office.



**American Cyanamid Company**

Agricultural Research Division  
P.O. Box 400  
Princeton, NJ 08540

An Equal Opportunity Employer M/F/H  
No Agencies Please

## POSITIONS OPEN

### THE UNIVERSITY OF CHICAGO PRITZKER SCHOOL OF MEDICINE

**RESEARCH ASSOCIATE POSITIONS ARE AVAILABLE TO STUDY CELL AND MOLECULAR BIOLOGY OF THE KIDNEY IN PHYSIOLOGICAL AND DISEASE STATES.** The Section of Nephrology is seeking investigators to join highly differentiated research programs in the following areas: mineral metabolism and bone physiology (Bushinsky), renal stone disease (Coe), calcium transport (Favus), cell biology of transport ATPases (Katz), vasopressin metabolism in pregnancy (Lindheimer), cell-cycle regulated genes, oncogenes and tumors (Sukhatme), and autocrine control of renal growth (Toback). The successful candidates will provide expertise and leadership to integrate one or more of the following techniques into these laboratories: monoclonal antibody production, immunoprecipitation of antibodies, immunoprecipitation of proteins, in vitro translation, protein chemistry including HPLC, recombinant DNA manipulation and DNA sequencing, in situ hybridization, site-directed mutagenesis, cell transformation, microinjection of DNA and proteins. A Ph.D. degree is essential, and postdoctoral experience is encouraged. Salary is highly competitive, and commensurate with experience. Duration of appointment is open. Send curriculum vitae, cover letter detailing specific research interests, and names and telephone numbers of three references to: **Dr. Fredric Coe, Section of Nephrology, Department of Medicine, Box 28, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

**RESEARCH ASSOCIATE IN OPIOID PHARMACOLOGY**—Available 1 April 1987: To study factors that modify the biosynthesis, storage and release of opioid peptides. Experience in neuroscience, biochemical pharmacology, and behavioral pharmacology is desirable. Salary: \$22,000 per annum, plus benefits. Send curriculum vitae and references to: **Dr. Charles E. Inturrisi, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. Equal Opportunity Employer.**

**RESEARCH FELLOW: Resources for the Future (RFF)** seeks fellow to join new Climate Resources program. Candidate selected will participate in planning and implementation of project research aimed at development of policies that reduce vulnerability of soil and water resources, agriculture and forestry to stressful climatic events. Ph.D. or equivalent training and experience in climatology, natural science, or geography; course work and/or experience in production agriculture, forestry, or water resources management and familiarity with national, international development agencies desirable. Computer skills, knowledge of computer modelling of physical and/or biological systems required; ability to communicate effectively in written or oral presentations and to work in interdisciplinary environment. Two-year appointment with possibility of renewal. Salary negotiable, based on experience. Position available: 1 June 1987. Application deadline: 31 March 1987, or until suitable candidate selected. RFF is a nonprofit, social science research organization; generous benefits package includes 20 days annual and 13 days sick leave; paid medical, life insurance and retirement. Please send covering letter, résumé, transcript(s) of graduate school credits, names of three professional references to: **Debbie Groberg, Climate Resources Program, Box F, Resources for the Future, 1616 P Street, NW, Washington, DC 20036. RFF is an Equal Opportunity Employer. Women and minority candidates encouraged to apply.**

### RESEARCH SCIENTIST

**Norden Laboratories, a subsidiary of SmithKline Beckman Corporation** and leader in the animal health industry, has a position available in our biological research and development area. This individual will plan, conduct and evaluate the production and characterization of monoclonal antibodies and maintain hybridoma cell lines. Applicants must have an M.S. in microbiology plus 1 year of proven experience in monoclonal antibody production, specifically immunoassays, Western blot analysis, electrophoresis and column chromatography.

Norden offers an excellent benefit program including life, health and LTD insurance; merit programs, savings plans, liberal vacations and much more. If you are interested in this professional opportunity, send résumé and salary requirements (in confidence) to Connie Soucie at: **Norden Laboratories, Inc., P.O. Box 80809, Lincoln, NE 68501.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW

The Mass Spectrometry Facility of the University of California, San Francisco, is seeking a uniquely qualified Ph.D. **BIOCHEMIST** to participate in several ongoing long-term research projects studying the carbohydrate structure of glycoproteins.

Preferred qualifications: (i) extensive experience in oligosaccharide isolation and purification, (ii) some experience in the use of gas chromatography/mass spectrometry for carbohydrate structural analyses, (iii) strong interest in development of advanced high mass mass spectrometry for study of intact oligomers. Salary will be commensurate with applicant's qualifications and experience.

Send curriculum vitae and three letters of recommendation to:

**Professor Susan J. Fisher and  
Professor A. L. Burlingame  
Department of Pharmaceutical Chemistry  
University of California, San Francisco  
San Francisco, CA 94143-0446**

*University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### RESEARCH ASSOCIATE IN PHARMACOLOGY

Applications are invited from individuals with hands-on experience in computer-aided drug design to participate in an active program on design and evaluation of formyl peptide chemoattractants. Specific experience in the area of molecular graphics of peptides and peptide synthesis is highly desirable but not required. Applications will be accepted until 15 March 1987. Send curriculum vitae and names of three references to: **Dr. Richard J. Freer, Department of Pharmacology and Toxicology, Box 524, Medical College of Virginia, Richmond, VA 23298. Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

**RESEARCH FELLOW.** Ph.D. to study mechanism of action of cocarcinogen catechol on carcinogens present in tobacco smoke. Involves identification and quantitation of DNA adducts in mouse skin, synthesis of modified deoxyribonucleoside markers and measurement of various enzyme activities. Please send curriculum vitae and brief statement of research experience to: **Personnel Office, American Health Foundation, 1 Dana Road, Valhalla, NY 10595. An Affirmative Action/Equal Opportunity Employer M/F/H/V.**

The Radiation Biochemistry Department at the **Armed Forces Radiobiology Research Institute (AFRRI)** which is a command of the **Defense Nuclear Agency (DNA)** is seeking a qualified candidate to fill the position of **SUPERVISORY RESEARCH BIOLOGIST/SUPERVISORY RESEARCH CHEMIST (CHAIRMAN, RADIATION BIOCHEMISTRY DEPARTMENT)**. This department is responsible for a broad area of research related to elucidating and modifying the fundamental biochemical mechanisms of radiation-induced cell injury and death. This program utilizes a broad spectrum of multidisciplinary approaches including chemistry, biochemistry, molecular biology, and recombinant DNA methodology. As Chairman, Radiation Biochemistry Department, responsible for administrative and technical supervision of approximately 50 employees, the candidate must have extensive experience in biochemistry and cellular radiobiology as evidenced by a strong publication record and relevant professional activities. The Supervisory Research Biologist/Supervisory Research Chemist position is a permanent position and is available immediately, salary range is \$52,000 to \$67,900 (Reference MSVA 129/86). To apply for this Civil Service position, send curriculum vitae and/or SF-171 and reprints of representative publications to: **The Armed Forces Radiobiology Research Institute, Civilian Personnel Office, Bethesda, MD 20814-5145 by 31 March 1987. Indicate announcement MSVA 129/86. Direct inquiries to: Commander Richard I. Walker, Deputy Director, telephone: 202-295-1211 or Ms. Joann Kelleher, Personnel Management Specialist, telephone: 202-295-1426. U.S. citizenship is required. The Armed Forces Radiobiology Research Institute is an Equal Opportunity Employer.**

## POSITIONS OPEN

**RESEARCH ENVIRONMENTAL SCIENTIST/CHEMIST.** The California Public Health Foundation (CPHF), Berkeley, California, invites applications for a research position to study atmospheric transport of and human exposure to chemicals released from waste management facilities. Applicants should have extensive experience in analytical chemistry and air sampling technology including instrumentation, calibration, and quality control. Competency in atmospheric dispersion modeling and other mathematical modeling techniques is desirable. Familiarity with hazardous waste/air pollution literature valuable. Publication record, communication skills and interest in collaboration essential. Candidates should have an advanced degree in chemistry or a related discipline. Salary: \$3494 to \$4224 per month, commensurate with qualifications and experience. Send résumé and names of three references to: **Penelope Ruhter, Acting Chief Executive Officer, California Public Health Foundation, P.O. Box 520, Berkeley, CA 94701. CPHF is an Equal Opportunity Employer.**

**DEPARTMENT OF POULTRY SCIENCE, THE PENNSYLVANIA STATE UNIVERSITY. TENURE-TRACK ASSISTANT PROFESSOR—PHYSIOLOGICAL GENETICS OR REPRODUCTIVE PHYSIOLOGY**—To establish independent research program in molecular or physiological genetics or in reproductive physiology of fowl and to complement department's existing programs in physiology, nutrition, and immunology. Teaching: Undergraduate animal genetics and graduate course in area of expertise. Ph.D. in genetics, physiology, or animal or poultry science with emphasis in genetics and physiology desired. Formal training in genetics and postdoctoral training or experience desirable. Starting date: 1 July 1987. Competitive salary commensurate with background and experience. Send curriculum vitae, including research interests, and 3 references by 1 April 1987 to: **Dr. H. S. Siegel, Head, Department of Poultry Science, 214 Henning Building, Box A, The Pennsylvania State University, University Park, PA 16802. Penn State is an Equal Opportunity/Affirmative Action Employer.**

## DEAN OF PHARMACY

THE PHILADELPHIA COLLEGE OF PHARMACY, established in 1821 as the first college of pharmaceutical education in the United States, invites applications for the position of Dean of Pharmacy. Approximately 1000 students are enrolled in the baccalaureate, Doctor of Pharmacy and graduate (MSc/PhD) programs in Pharmacy. The Dean of Pharmacy has primary administrative responsibility for the professional departments involved in pharmaceutical education and research, and functions with the Dean of Arts and Sciences in overall program planning.

The College seeks for this key position an individual experienced in leadership ability and demonstrated commitment to advancement of the profession. Essential qualifications include an earned discipline and a record of scholarly achievement commensurate with appointment to the rank of Professor.

The position is available July 1, 1987. Applications should include a letter of interest, curriculum vitae, and the names and addresses of at least three references. Applications should be submitted, prior to February 20, 1987 to:

**Dr. Roger L. Schnaare, Chairman  
Search Committee**

### PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE

Woodland Ave. at 43rd St.  
Philadelphia, PA. 19104  
PCPS is an Affirmative Action  
Equal Opportunity Institution

## FACULTY POSITIONS AVAILABLE (2)

### BIOLOGICAL SCIENCES

THE PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE invites applications for two tenure track positions at the Assistant Professor level beginning August 15, 1987.

**MOLECULAR GENETICIST**—The successful candidate will participate in a team-taught freshman biology program, assume responsibility for a dual level course in classical and molecular genetics and develop other undergraduate courses in areas of interest. The successful candidate will also be required to demonstrate significant knowledge of polyploid organisms and participate in the development of an undergraduate program in plant biotechnology. To be considered, an applicant must have a strong interest in UNDERGRADUATE TEACHING and if hired, will be expected to develop and maintain a research program. Persons wishing to be considered must have a Ph.D. degree.

**GENERAL BIOLOGIST/ANIMAL BIOLOGIST/ECOLOGIST**—The successful candidate will have a major role in a team-taught freshman biology lecture/laboratory program. In addition, the selected individual will be expected to assume responsibility for undergraduate courses such as Invertebrate Zoology, Animal Behavior and Environmental Biology, and develop other courses in areas of interest. To be considered, an applicant must have a strong interest in FRESHMAN INSTRUCTION, and if hired, will be expected to develop and maintain a research program. Individuals interested in EDUCATIONAL RESEARCH which focuses on methods for improving student understanding of biological concepts are encouraged to apply. Persons wishing to be considered must have a doctoral degree.

Applications for consideration should consist of the following: (1) a letter of application addressing the above criteria, (2) a complete resume including a current transcript, and (3) names, addresses and telephone numbers of three references. All applications must be submitted by February 28, 1987 to **Dr. Gilbert L. Zink, Chairman, Department of Biological Sciences, Philadelphia College of Pharmacy and Science, 43rd Street and Kingsessing Mall, Philadelphia, PA 19104.** An Equal Opportunity and Affirmative Action Employer.

## LIFE SCIENCE AND COMPUTER TECHNOLOGY OPPORTUNITY

We are seeking a technically-oriented senior professional with a marketing background for the Life Science Research Systems Department of BBN Laboratories Incorporated. In addition to broad understanding of marketing to the government and wide experience in life sciences and computing technology, this senior staff member should have many of the following characteristics:

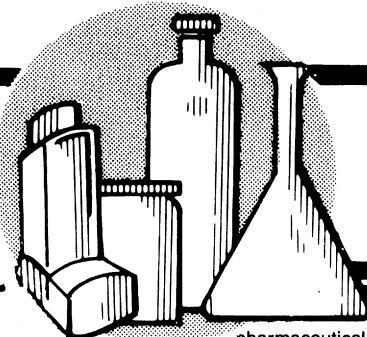
- interest in aggressive business growth and helping to build a leading contract research and systems development organization in the life sciences;
- successful record of marketing R&D contracts to both the US government and industry;
- a team player, enthusiastic about working closely with others;
- strong communication and interpersonal skills;
- self-motivated, willing to travel;
- a technical degree;
- experience with software systems;
- require unquestionable integrity and solid references.

Bolt Beranek and Newman (BBN) is a respectable R&D firm based in Cambridge, Massachusetts. We specialize in emerging technologies such as computers, data communications, Artificial Intelligence, underwater acoustics and environmental consulting.

**BBN Laboratories Incorporated offers competitive salaries and an outstanding benefits package including tuition reimbursement, 3 weeks' vacation and an employee stock purchase plan. Qualified candidates should forward their resume and salary requirements to Lesley A. Sullivan, BBN Laboratories Incorporated, 10 Fawcett Street, Cambridge, MA 02238.**

An equal opportunity employer M/F/H/V

**BBN Laboratories Incorporated**



## Glaxo Has The Prescription For Career Success

The fastest growing research-oriented pharmaceutical company in the U.S. has the following opening with its Corporate Headquarters located in Research Triangle Park, N.C. (near Raleigh / Durham).

### RESEARCH SCIENTIST

Qualified candidate will be responsible for:

- Establishing and supervising a highly visible biochemical laboratory to study drug receptor interactions.
- Developing and establishing various receptor-ligand binding methods for drug receptor classification (i.e. adrenergic, cholinergic, opioids, etc.)
- Investigating the biochemical properties of various agents against selective receptors in order to identify possible therapeutic applications.

Background should include an MS in Life or Physical Sciences or equivalent theoretical depth, with 4-5 years experience in membrane receptor-ligand binding, drug-receptor kinetics, radioimmunoassay, and analytical/preparative biochemistry. Candidate must possess excellent communication, managerial and supervisory skills.

Your abilities and potential will be recognized with a competitive starting salary and benefits package. Our location offers a mild climate year round, access to some of the finest universities in the country, numerous cultural activities and nearby recreational facilities. For prompt consideration, please forward your resume, including salary history, to:

(No Phone Calls, Please)

Dept. 86-236E-SC

No Private Agency Referrals, Please

**Glaxo Inc.**

P.O. Box 13398  
Research Triangle Park, NC 27709

An Equal Opportunity Employer M/F/V/H



# DIABETES RESEARCH

## Senior Scientist

**S**andoz Pharmaceuticals Corporation is responsible for products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

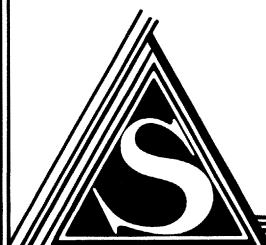
The Sandoz Research Institute is currently seeking an experienced Physiologist to play a vital role in diabetes research. Our position offers a unique opportunity for an innovative, self-motivated, independent scientist to develop models of chronic hyperglycemia. The successful candidate will work closely with interdisciplinary research teams of molecular biologists, biochemists and cell physiologists. Responsibilities will initially include supervision of a laboratory and at least one research scientist.

The requirements of the position include:

- Ph.D. or equivalent in physiology or related discipline.
- Experience with small animal infusion or animal modeling.
- Record of significant publications in major scientific journals.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please respond to Job #329 and forward your resume with salary requirements in confidence to:



Joseph P. Castellano  
Director of Human Resources  
**SANDOZ RESEARCH INSTITUTE**  
**SANDOZ PHARMACEUTICALS CORPORATION**  
East Hanover, New Jersey 07936

An Equal Opportunity Employer M/F

## ASSISTANT PROFESSOR OF BIOCHEMISTRY

For this appointment in Biochemistry, we seek an individual who can develop an independent research program in some aspect of molecular biology (e.g., regulation of gene expression or application of DNA/protein sequencing or recombinant DNA technology in areas such as endocrinology, neurobiology or membranes). This is a tenure-track, state funded position with a competitive salary. Start-up funds and funds for major investment in new technologies are available. Minimum requirements are a Ph.D. with postdoctoral experience and the ability to develop a grant-supported research program, competence and interest in teaching medical and graduate students is important. Send a copy of c.v., names of three references and a one or two page research proposal to: Dr. Alfred Stracher, Chairman, Department of Biochemistry, Box 8, State University of New York, Health Science Center at Brooklyn, 450 Clarkson Ave., Bklyn., NY 11203.



State University of New York  
**HEALTH SCIENCE CENTER  
AT BROOKLYN**  
EO/AA Employer, DMC #C-0053

# HOFFMANN-LA ROCHE

## Sr. Scientist

# Obesity Research

Hoffmann-La Roche, an established leader in the pharmaceutical and health care industry, has an excellent opportunity for a PhD cell biologist/biochemist in exploratory research.

The department of Neurobiology and Obesity Research is seeking a creative Senior Scientist who will be responsible for initiating a basic and applied research program utilizing cell culture and isolated cell models to identify and study therapeutics for use in obesity.

The successful candidate will have demonstrated a strong desire to participate in model development and drug discovery.

Qualifications include a PhD in cell biology, biochemistry or pharmacology and 2 years postdoctoral training with relevant experience in cell culture technology. A working knowledge of the biochemistry of receptor-ligand interaction and receptor-messenger

coupling is essential. Experience in the areas of lipid and carbohydrate metabolism is desirable, while knowledge of the regulation of protein synthesis would be helpful. Record of publication and strong communication skills are required.

Roche offers a professional environment and an attractive compensation package. Please send resume and publication list to: Position JT, c/o Mrs. Eleanor M. Malone, Professional Employment & Staffing Specialist.



**HOFFMANN-  
LA ROCHE INC.**

Nutley, NJ 07110

*Products that matter  
from people who care*

An equal opportunity employer

# TOXICOLOGY PHARMACEUTICAL RESEARCH

Continued expansion at the Warner-Lambert/Parke-Davis Pharmaceutical Research Division has created immediate opportunities for several types of toxicologists to join a dynamic team of scientists in our Pathology and Experimental Toxicology Department. These opportunities are located in our new 90,000 square foot toxicology laboratory in Ann Arbor, adjacent to The University of Michigan.

## **General Toxicologist(s)**

The responsibilities for these positions include the planning, design and execution of a variety of toxicity studies designed for safety evaluation in preclinical studies. Duties also will include summarization and interpretation of toxicology preclinical data, supervision of technical staff and representation of the department on Research Division planning/project teams.

Requirements for these positions include a Ph.D. in Toxicology or related field and 0-2 years industry experience.

## **Veterinarians**

The responsibilities of this position are the same as for the general toxicologist with the addition of laboratory animal veterinary responsibilities.

Requirements include a D.V.M. degree and a minimum of one year postdoctoral experience or equivalent in laboratory animal medicine.

## **Veterinary Pathologist(s)**

The responsibilities for these positions include the design, conduct and reporting of a variety of toxicology studies with emphasis on the clinical and anatomical evaluation of animals used in studies to determine the safety of new drug candidates.

Requirements for these positions include a D.V.M. degree and board certification in veterinary pathology (ACVP). Industrial experience is desirable; but not required.

## **Reproductive Toxicologist(s)**

The responsibilities of this position include the design, execution and analysis of studies to determine influence of new drug candidates on the embryo and fetus. Supervision of technical staff is an integral part of the positions-will work both independently and as a part of project/planning teams.

Requirements include a Ph.D. in Reproductive Biology or closely allied field (anatomy, embryology), 1-3 years postdoctoral experience in reproductive toxicology, knowledge of GLPs, experience in maintenance of animal colonies, embryo culture techniques, and in animal care and handling.

## **Safety Assessment-Regulatory Toxicologist**

The responsibilities of this position include the supervision of the compilation and presentation of verbal and written communiques associated with requirements of domestic and international regulatory affairs and GLPs; participation in department research as study director for in-house research and monitor of studies contracted outside; participation on Research Division project/planning teams; and the preparation of department position documents.

Requirements include a Ph.D. in toxicology or related field and 0-2 years experience in regulatory processes.

## **Clinical Chemist**

The responsibilities of the position include the development and implementation of advanced methods in clinical chemistry for the evaluation of drug safety in animal toxicity studies of Phase I clinical trials in man and establishing methods to evaluate possible drug interference in routine assays.

Requirements include a Ph.D. in Clinical Chemistry or related field, 1-2 years postdoctoral training, experience in clinical chemistry instrumentation and statistics and excellent communication skills.

We invite qualified applicants to consider a position at WL with excellent compensation, benefits, professional development, and living and working environment.

WL representatives will be recruiting at the Society of Toxicology meeting Feb. 24-27. We would like to review resumes in advance of the meeting in order to schedule appointments. Please indicate for which position you are applying. Mail material to:

Ms. M. Wolin  
Warner-Lambert/Parke-Davis  
2800 Plymouth Rd. • Ann Arbor, MI 48105

**WARNER  
LAMBERT**

"EQUAL OPPORTUNITY IN ACTION"

## POSITIONS OPEN

### DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

ARS is seeking a **RESEARCH LEADER/AVIAN IMMUNOLOGIST**, at the Southeast Poultry Research Laboratory, Athens, Georgia. Position (GM-13/15, \$38,727 to \$69,976) to plan and conduct research, supervising a team of scientists in investigating the immune responses of chickens to the viral diseases, Newcastle and avian influenza. The position provides an excellent opportunity to lead a research group in well-equipped laboratories and animal facilities. Knowledge and experience in both T- and B-cell immune response research required. Salaries are commensurate with experience. Must be a U.S. citizen. For information on the research program and/or position contact: **Dr. C. W. Beard** at 404-546-3432. For information on application procedures, forms, contact: **Karen S. Johnson** at 301-344-1508. Mailing address: **USDA, Agricultural Research Service, Southern Section, Building 417, BARC-East, Beltsville, MD 20705**. Applications in response to this ad must be marked 7S003 and received by 31 March 1987. *USDA is an Equal Opportunity Employer.*

### DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

ARS is seeking a **RESEARCH VETERINARIAN/MICROBIOLOGIST** at the Southeast Poultry Research Laboratory, Athens, Georgia. Position (GS-11/13, \$27,172 to \$50,346) to plan and conduct research on salmonella colonization in chickens in excellent laboratory and animal facilities. Knowledge and research experience required in enteric bacteriology. Salaries are commensurate with experience. Must be a U.S. citizen. For information on the research program and/or position contact: **Dr. C. W. Beard** at 404-546-3432. For information on application procedures, forms, contact: **Karen S. Johnson** at 301-344-1508. Mailing address: **USDA, Agricultural Research Service, Southern Section, Building 417, BARC-East, Beltsville, MD 20705**. Applications in response to this ad must be marked 7S001 and received by 31 March 1987. *USDA is an Equal Opportunity Employer.*

### VICE CHANCELLOR FOR RESEARCH AND DEAN OF THE GRADUATE SCHOOL UNIVERSITY OF ALASKA-FAIRBANKS (UAF)

The Vice Chancellor, under the general guidance of the Chancellor, is responsible for providing overall leadership, coordination, and direction to UAF research and scholarly activities. UAF is the center for organized research within the University of Alaska system. Additionally, the Vice Chancellor has responsibilities for assuring the overall quality of graduate programs in concert with the Graduate Council. Qualifications include a Ph.D. or equivalent, record of scholarly achievement as evidenced by publication record, understanding of basic and applied research, and success in obtaining sponsored research funding. Experience in the management of a research/academic unit is desirable. Send nominations or applications to:

**Dean James V. Drew, Chairman**  
Search Committee  
303 Signers' Hall  
University of Alaska-Fairbanks  
Fairbanks, AK 99775  
Telephone: 907-474-7188

Applications should include a letter of application, résumé, and at least three references. Closing date: 31 March 1987. *The University is an Equal Opportunity/Affirmative Action Employer and Educational Institution.*

### VISION RESEARCH ASSISTANT

Exciting job combines clinical and basic science work: ERGs, EPs, infant VA, brain localization studies. BA/BS; 1 year plus experience in electrophysiology required. Candidate should enjoy challenge, be innovative and independent. Top salary negotiable. Send résumé and names of references to: **R. Srebro, M.D., University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, TX 75235**, or telephone: 214-688-3846, 3826. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### TENURE-TRACK ASSISTANT PROFESSOR.

The Department of Pharmacology invites applications from individuals with at least 2 years of productive postdoctoral experience and demonstrated expertise in the application of molecular biology techniques to the study of receptors and post-receptor events. The successful candidate will initially participate in ongoing research and it is expected that in the future will be able to generate his/her own research support. Candidates must be U.S. citizens or have permanent residence status. Applicants should send letter with description of research background and interests, complete curriculum vitae, including list of publications, and the names and addresses of three references, by 1 April 1987, to: **Dr. Jose M. Musacchio, Professor and Acting Chairman, Department of Pharmacology, New York University (NYU) Medical Center, 550 First Avenue, New York, NY 10016**. *NYU is an Affirmative Action/Equal Opportunity Employer M/F.*

The Department of Biochemistry, University of Arizona, invites applications for two tenure-track positions in the area of NMR spectroscopy (rank open). Candidates should have a Ph.D. and/or M.D. degree, or equivalent, and a strong record of scholarship and research including postdoctoral experience, and the ability to participate in the teaching of undergraduate, graduate and medical students. We wish to appoint someone with a background in the application of NMR to macromolecules and a second individual recruited jointly with the Department of Radiology with expertise in the use of NMR with intact cells, organelles or whole organs. Applications should include curriculum vitae and a statement of research goals. Send applications and make arrangements to have three letters of recommendation sent to: **Dr. M. A. Cusanovich, Department of Biochemistry, University of Arizona, Tucson, AZ 85721**. Applications will be reviewed beginning 1 March 1987 but the position will be open until filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from female and minority group members are strongly encouraged.*

## COURSES

### UNIVERSITY OF ABERDEEN M.Sc. in HUMAN METABOLISM AND NUTRITION (Research and Experimental Methods)

Applications are invited for a 12-month full-time postgraduate course leading to the degree of M.Sc. in Human Metabolism and Nutrition. The course is offered by the University of Aberdeen in conjunction with the Rowett Research Institute and Robert Gordon's Institute of Technology. The course provides systematic instruction and practical experience in techniques relevant to the study of human metabolism and nutrition in health and disease. Additionally students will undertake an original research project of 5 months' duration. The course is designed for graduates in medicine or the biomedical sciences, or for others with comparable qualifications who wish to be trained for a career in which a critical and innovative approach to human nutrition is important.

For further details and application write to: **Dr. C. E. Casey, Department of Medicine and Therapeutics, University of Aberdeen, Polwarth Building, Foresterhill, Aberdeen AB9 2ZD, U.K.**

### THE MIND BROADENING ADVENTURE CONTINUES

### with THE BIOTECHNOLOGY DIVISION OF FISHER SCIENTIFIC sponsoring

14 April 1987: "A VIEW OF BIOTECHNOLOGY FROM THE SIDE LINES: Restriction enzymes gene juggling, AIDS virus and related topics" to be held at the Hyatt Cambridge in Boston, Massachusetts, and

21 April 1987: "MOLECULAR SELF-DEFENSE: A look at contemporary immunology in research and medicine" to be held at the Pooks Hill Marriott in Bethesda, Maryland. For further details write to: **S. Daniel Makover, Ph.D., Fisher Scientific, 711 Forbes Avenue, Pittsburgh, PA 15219** or telephone: 412-562-1702.

## AWARDS

### SUMMER RESEARCH AWARDS IN ECOLOGY.

The Pymatuning Laboratory of Ecology, University of Pittsburgh has available research awards for the summer of 1987. Proposals are welcome at all academic levels for research in any area of ecology. Support will usually not exceed \$3500, and may include stipend, travel, equipment, supplies, assistants, and room and board at the laboratory. Inquiries or proposals should be sent by 15 March to: **Pymatuning Laboratory of Ecology, Route 1, Box 7, Linesville, PA 16424**.

## CONFERENCE

### THE NEW YORK ACADEMY OF SCIENCES An International Organization

### Conference On: RECENT ADVANCES IN THE BIOMEDICAL SIGNIFICANCE OF TRH 9 to 11 November 1987 Hyatt Regency, Bethesda, MD

During the past 5 years, significant advances have taken place in the biomedical significance of TRH, particularly in relationship to its biosynthesis, molecular biology, role as a neurotransmitter, and clinical efficacy in various neurologic disorders. The purpose of this conference is to evaluate this new knowledge from an interdisciplinary standpoint and chart the course for future work with this neuropeptide.

There will be contributed poster sessions. The deadline for submission of abstracts is 1 June 1987. A 200-word summary of work to be presented should be sent to: **Ivor M. D. Jackson, M.D., Director, Division of Endocrinology, Rhode Island Hospital, 593 Eddy Street Providence, RI 02902**.

### CONFERENCE CHAIRS:

**Geoffrey Metcalf, Ph.D.**, Department of Pharmacology, Ayerst Laboratories Research, Inc., Princeton, N.J. and

**Ivor M. D. Jackson, M.D.**, Director, Division of Endocrinology, Rhode Island Hospital, Providence, R.I., and Chief of Endocrinology, Brown University.

For program and registration information: **Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, NY 10021**.

## MEETING

### PUBLIC NOTICE

The National Research Council has formed a scientific committee, chaired by Dr. Arthur Upton, to consider the effects on populations of exposure to low levels of ionizing radiations. This is the fifth and most recent of the NRC/BEIR Committees on the Biological Effects of Ionizing Radiations. Its members will examine the effects on human health of both low-LET radiations and neutrons. The Committee invites members of the public to comment at a **public meeting** on the scientific basis for formulating estimates of the risk due these radiations. The meeting will begin at 9:00 a.m. 2 March 1987 at the **National Academy of Sciences Building located at 2101 Constitution Avenue, NW, Washington, DC, 20418**. Since space is limited, please notify: **Dr. William Ellett** by letter at the above address or by telephone: 202-334-2743 before 20 February 1987 of your interest in attending and/or addressing this meeting. Selected speakers will be asked to submit fifteen copies of a summary statement prior to the meeting.

## PROGRAM

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with a doctorate-level degree in science the opportunity to earn the doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Dr. D. M. Chauncey, Ph.D.-O.D. Program Director, The New England College of Optometry, 424 Beacon Street, Boston, MA 02115**; Telephone: 617-266-2030, extension 147.

## BUILDING A NEW LAB?

LET THE SCIENCE FREE PRODUCT  
INFORMATION SERVICE PUT YOU IN  
TOUCH WITH THE VENDORS WHOSE  
PRODUCTS YOU WILL NEED.

SIMPLY WRITE US A LETTER STATING  
THE SPECIFICS ABOUT YOUR PROPOSED  
LAB AND WE WILL DO THE REST.

### WRITE TO:

SCIENCE MAGAZINE  
NEW LAB SERVICE DEPT.  
1515 BROADWAY  
NEW YORK, N.Y. 10036

## THE SCIENCE RECRUITMENT

### "FOUR DAY CLOSE"

#### NOW YOU CAN SEE YOUR AD IN SCIENCE FOUR DAYS AFTER SUBMISSION

Scientific Recruiters can now advertise positions almost as soon as the need arises. Instead of reserving space a month or more in advance, you can now place your ad four days before the magazine mailing date. SCIENCE is mailed one week prior to cover date.

Film (right-reading, emulsion face down) or full camera ready art and insertion order must reach: SCIENCE, Short Close Desk, 1515 Broadway, New York, NY 10036 by NOON Mondays (except for legal holidays when material must reach New York by Noon Fridays). Because space is limited, the four-day close page will be reserved on a first-come, first-served basis, at a 15% premium. 1/4 and 1/2 page ads only.

Now you don't have to wait to find the researchers you need immediately, nor must you advertise in a Sunday paper that pans a lot of sand, but not much gold. Scientific employers know that SCIENCE ads fill the job better. Now they fill it faster too.

You can call it "INSTANT RECRUITMENT."

For further information, telephone Ed. Keller, Recruitment Advertising Manager, or Donna Rivera, Production Manager at SCIENCE: 212-730-1050, or write to: SCIENCE, 1515 Broadway, NY, NY 10036.

**CURRENT DISTRIBUTION 160,000**

## MOLECULAR BIOLOGIST

Abbott Laboratories combines strong business and operational planning with a long tradition of innovation in new product development for the healthcare industry. Recognized as one of the five best managed companies in the nation for 1986 by Dun's Business Month, we offer intelligent corporate support along with a superior scientific environment. We now seek an individual for our Corporate Molecular Biology Group to help further our research aims.

The selected candidate will provide an important resource, performing experiments using cDNA synthesis and DNA cloning technologies. We require an MS with background in DNA cloning technologies. 1-2 years experience in the laboratory and in cDNA synthesis are preferred.

A \$3.8 billion leader, we offer an excellent salary and benefits package including profit sharing and stock retirement plan. We are headquartered in an attractive suburban location just 30 miles north of Chicago on the Lake Michigan shoreline. For confidential consideration, send resume with salary history to: **Stephanie Mondello/Corporate Placement, Dept. S/2-6.** An Affirmative Action Employer.

 **ABBOTT**  
ABBOTT PARK IL 60064

"HEALTH CARE WORLDWIDE"

## Senior Pharmacologist

### Alterations of Ion Movements in Hypertension

The Squibb Institute for Medical Research, a recognized leader in the research and development of novel therapeutic agents, has an exciting opportunity available in the Department of Pharmacology. Primary responsibilities will include the conception and implementation of test systems for the evaluation of the effects of new antihypertensive agents on cell membrane ion movements. Extensive knowledge of patch clamp techniques as well as expertise in the measurement of ion fluxes are essential. The selected candidate will participate in collaborative research with other scientists, supervise technical staff, and effectively communicate experimental results in oral and written forms. Qualifications for this position include a Ph.D. in Pharmacology/Physiology or equivalent and at least 2-3 years of relevant postdoctoral experience.

The Squibb Institute, located in Princeton, NJ, a pleasant semi-rural setting convenient to both Philadelphia and New York, supports innovative research and encourages continued publication of results in scientific journals and attendance at scientific meetings. Qualified candidates should submit their C.V. in confidence to the **Squibb Institute for Medical Research, Human Resources Department 403B, Princeton, NJ 08543-4000.** An equal opportunity employer.



**SQUIBB**

*Where science comes to life.*

## TRAINING PROGRAM

### GRADUATE TRAINING PROGRAM IN THE BASIC MEDICAL SCIENCES

The University of South Alabama College of Medicine offers a program leading to the Ph.D. degree in anatomy, biochemistry, microbiology, pharmacology, and physiology. All students receive a tuition waiver and a \$6500 per year stipend. Following a core curriculum, in-depth research training is provided in a discipline and laboratory selected by the student. Interested candidates are invited to apply to: **Dr. Edwin R. Hughes, Director, University of South Alabama, MSB 1015, Mobile, AL 36688; telephone: 205-460-6153.**

## SYMPOSIUM

### BIOMEDICAL IMPORTANCE OF MARINE ORGANISMS

Third Biennial Symposium of the California Academy of Sciences, San Francisco, 30 April to 2 May 1987

#### TOPICS TO BE COVERED

**BIOLOGICAL PERSPECTIVES:** Concerns of taxonomists; Approaches to exploring for biologically active compounds.

**CHEMICAL PERSPECTIVES:** Isolation of novel bioactive compounds; Phylogenetic patterns in biologically active compounds.

**PHARMACOLOGICAL PERSPECTIVES:** Transmitters, receptors, and ion channels; Drug development.

**PHARMACEUTICAL PERSPECTIVES:** Resources for obtaining marine natural products in quantity; Prospects for the future.

Agenda and registration materials are available from: Symposium, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118. Registration fees: \$25 (students), \$60 (members of the California Academy of Sciences), \$75 (others).

## WORKSHOP

### WORKSHOP ON THE MATRIX OF BIOLOGICAL INFORMATION

July 13 - August 14, 1987

Data Banks, AI, Computers and Macromolecules -- applied to Cellular Biology to explore the interface of Informatics and Biological Theory

For more information write to:

Ginger Richardson

Santa Fe Institute

P.O. Box 9020

Santa Fe, NM 87504-9020

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS

Department of  
Cellular and Developmental Biology  
Organismic and Evolutionary Biology  
Harvard University

A limited number of postdoctoral research positions become available from time to time. Some appointments are funded through research grants awarded to faculty members and are ordinarily for 1 year, sometimes renewable, other appointments are possible through postdoctoral fellowships. For a list of faculty members who have postdoctoral positions available, write to the respective department office: **Harvard University, 16 Divinity Avenue, Cambridge, MA 02138.** (Do not send applications.) *Harvard University is an Equal Opportunity/Affirmative Action Employer.*

## RESEARCH GRANTS

**THE WILLS FOUNDATION** is interested in funding research grants and postdoctoral fellowships in Huntington's disease. Grants range from \$10,000 to \$25,000 for 1 year with renewal possible. 1 March 1987 preapplication deadline. Contact: **P.O. Box 27534, Houston, TX 77227-7534; telephone: 713-965-9043.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP**—Postdoctoral Fellowship available in a research program to develop new detectors and detector configurations for high resolution multilayer positron emission tomography. Ph.D. in physics or nuclear physics required. One-year term appointment renewable up to three years. Stipend \$1900 to \$2170 per month. Send curriculum vitae and names of three references to: **Dr. Steve Derenzo, Attn: Ms. Jacquie Schilling, Lawrence Berkeley Laboratory Employment Office, One Cyclotron Road, 90-1042, Berkeley, CA 94720.** Please specify Job No. B/4011. *An Affirmative Action/Equal Opportunity Employer. M/F/H.*

### POSTDOCTORAL FELLOWSHIP CARDIOVASCULAR PHARMACOLOGY

The Department of Pharmacology at The University of Texas Health Science Center, San Antonio, Texas, has a postdoctoral position available to study the neural control of the circulation. Background should be sufficient to conduct research as a collaborator/trainee in the neurobiology of the cardiovascular system. Send résumé and names of three references to: **Vernon S. Bishop, Ph.D., Department of Pharmacology, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7764.** *The University of Texas Health Science Center at San Antonio is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIPS

The New England Injury Prevention Research Center (NEIPRC) is a collaboration of Boston University, Harvard University and Tufts University, and is centered at the Harvard School of Public Health. One- or 2-year postdoctoral fellowships are available for individuals with training in biostatistics, maternal and child health, economics, engineering, epidemiology, policy analysis, preventive medicine or the social sciences. Fellows will participate in NEIPRC's working groups concerned with prevention of pediatric injury, intentional injury, and/or motor vehicle injury. Working groups are engaged in policy development, curriculum development, design of demonstration projects, preparation of research proposals, and publication of scientific papers related to injury control. Positions are available beginning 1 July 1987 through 1 September 1987. Salary range: \$20,000 to \$26,000, depending upon experience. Applicants should contact: **John D. Graham, Assistant Professor of Policy and Decision Sciences, Department of Health Policy and Management, Harvard School of Public Health, 677 Huntington Avenue, Boston, MA 02115.**

### PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

Biochemistry—Biology—Biomathematics—Biomedical Engineering—Biophysical Sciences—Biostatistics—Chemistry—Computer Science—Cell Biology and Anatomy—Genetics—Immunology—Neuroscience—Nutrition Sciences—Materials Engineering—Medical Genetics—Medical Psychology—Molecular Cell Biology—Pathology—Pharmacology—Physics—Physiological Optics—Physiology—Public Health—Virology

Well-funded faculty with diverse interests. Good post-graduation placement record. Above average stipends include payment of tuition. Contact: **The Graduate School (A), University of Alabama at Birmingham, Birmingham, AL 35294; telephone: 205-934-8246.** *Equal Opportunity/Affirmative Action Institution.*

**POSTDOCTORAL FELLOWSHIP/RESEARCH ASSOCIATE.** Two-year position for recent Ph.D. to study hormonal regulation of phosphoinositide turnover in cell-free systems. Send curriculum vitae to: **Dr. John N. Fain, Van Vleet Professor and Chairman Department of Biochemistry, University of Tennessee, Memphis, 800 Madison, Memphis, TN 38163.** *An Equal Opportunity/Affirmative Action Employer.*

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIPS** in hemopoiesis research available immediately—(i) Hemopoietic growth factors; (ii) hemopoietic extracellular matrix. Backgrounds in protein purification and/or molecular genetics required. Some prior work with monoclonal antibodies desirable. Send curriculum vitae and names of three references to: **K. S. Zuckerman, M.D., University of Alabama at Birmingham, 513 Tinsley Harrison Tower, Birmingham, AL 35294.** *An Equal Opportunity/Affirmative Action Employer.*

**Herbert Scoville Peace Fellowships Available in 1987**—Applications now available for \$3000 stipend, plus travel expenses, for college graduates to work 3 to 4 months in Washington, DC, on arms control research and/or action activities for disarmament, nuclear arms control and peace organizations. Deadline for completed actions is 1 March for fall 1987 semester. For further information, program description, and application requirements, write: **Scoville Peace Fellowship Program, 110 Maryland Avenue, NE, Room 211, Washington, DC 20002.**

**RESEARCH FELLOWSHIP IN CARDIOVASCULAR DISEASES.** Two-year position available 1 July 1987 under NIH training grant, focusing on mechanisms of and therapy for arterial thrombosis and relationship to rheology, vasoconstriction, and pathologic substrate in animals and humans. Candidates should be partially or fully trained clinical cardiologists; U.S. citizenship or immigrant visa required. Supplemental clinical cardiovascular training can be considered. Send curriculum vitae, statement of research interests, and names of three references to: **James H. Chesebro, M.D., Mayo Clinic, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

### TRAVEL FELLOWSHIPS

There are a limited number of travel fellowships available for scientists wishing to attend the INSERM/CYTOGEN Conference on Covalently Modified Antigens and Antibodies in Diagnosis and Therapy to be held in Lyon, France, on 3 to 5 June 1987.

For information contact:

Carol Peevey  
CYTOGEN Corporation  
201 College Road East  
Princeton, NJ 08540  
Telephone: 609-987-8232

## MARKETPLACE

### IMMUNODIAGNOSTICS MONOCLONAL ANTIBODIES

We are an internationally established biotechnology company and are rapidly expanding our base in healthcare products. As part of this growth we will increase our range of immunodiagnostic products and therefore wish to locate suppliers of high affinity monoclonal antibodies for the *microbial antigens*

Neisseria gonorrhoeae	Chlamydia trachomatis
Campylobacter	Salmonella

Strep groups ABCDFG

and for the *human hormones*

hCG, LH, FSH, Prolactin, TSH, T3, T4.

Please reply BOX 7, SCIENCE.

### TERMINAL TRANSFERASE

Ratliff Biochemicals Corp. is pleased to announce the availability of economically priced, nuclease free, calf thymus terminal deoxynucleotidyl transferase. *High Specific Activity:* 39,000 units per mg protein per hour (present batch). *Purity:* Guaranteed to be absolutely free of nuclease and other contaminating activities. *Action:* The high specific activity and purity of our enzyme allows for an unusually high percentage of the total amount of deoxynucleoside triphosphate available to be incorporated as deoxynucleotides to the 3'-hydroxyl end of cut plasmids and duplex DNA. This allows for not only a more economical use of reagents, but also a high degree of predictability in terms of the number of "tails" added during a given reaction.

For further information contact:

Ratliff Biochemicals Corp.  
252 La Cueva  
Los Alamos, New Mexico 87544  
U.S.A.  
Telephone: (505) 662-7977

Circle No. 141 on Reader Service Card



# **INTERNATIONAL RESEARCH FELLOWSHIP OPPORTUNITIES for U.S. and Foreign Postdoctoral Scientists**

---

## **\*SENIOR INTERNATIONAL FELLOWSHIPS**

These fellowships offer opportunities to U.S. biomedical, behavioral, or health scientists to conduct research in a foreign institution. The program is for scientists who have established themselves in their chosen career in the United States and whose professional stature is well-recognized by their peers and institutional officials.

The purpose of this program is to enhance the exchange of ideas and information about the latest advances in the health sciences, both basic and clinical, and to permit U.S. scientists to participate abroad in ongoing study or research in the health sciences.

Fellowships are awarded for a period of 3 to 12 months and provide stipend, travel, and living allowance.

---

## **\*INTERNATIONAL RESEARCH FELLOWSHIPS**

These fellowships offer opportunities to foreign scientists in the formative stage of their research career to extend their research experience in a U.S. laboratory. Selections are first made by the Nominating Committee in a participating country or region. Over 50 countries or regions in the Americas, Africa, Asia and the Far East, Australia, Europe and New Zealand participate in the program.

The purpose of this program is to forge relationships between distinguished scientists in the United States and qualified scientists in other countries in order to solve health-related problems of mutual interest.

Fellowships are awarded for a minimum of 12 months and provide stipend, travel, and institutional allowance.

---

## **\*FOREIGN-SUPPORTED FELLOWSHIPS**

These fellowships for U.S. scientists are supported by specific foreign countries. They provide opportunities for scientists to conduct collaborative research in the country that provides funding.

The purpose of this program is to enhance the exchange of research experience and information in the biomedical, behavioral, and health sciences. The maximum period of support for all programs is 1 year and the minimum period of support varies with each program.

Participating countries are: FINLAND, FRANCE (CNRS and INSERM), FEDERAL REPUBLIC OF GERMANY, IRELAND, ISRAEL, NORWAY, SWEDEN, SWITZERLAND, and TAIWAN.

---

## **\*\*HEALTH SCIENTIST EXCHANGES**

These fellowships for U.S. scientists support short-term (2-12 weeks) visits to BULGARIA, HUNGARY, POLAND, ROMANIA, YUGOSLAVIA, or the SOVIET UNION.

The purpose of this program is to conduct collaborative activities in one of the health sciences or the health-related fields that are of mutual benefit to the United States and the participating country. Priority is given to visits designed to strengthen or expand ongoing collaborative relationships or to explore prospects for long-term cooperation.

The financial provisions include round-trip travel and in-country costs.

---

**JOHN E. FOGARTY  
INTERNATIONAL CENTER**  
for Advanced Study in the  
Health Sciences  
National Institutes of Health

Requests for additional information should be sent to:  
**\*International Research and Awards Branch**  
or  
**\*\*International Coordination and Liaison Branch**  
Fogarty International Center  
National Institutes of Health  
Bethesda, Maryland 20892

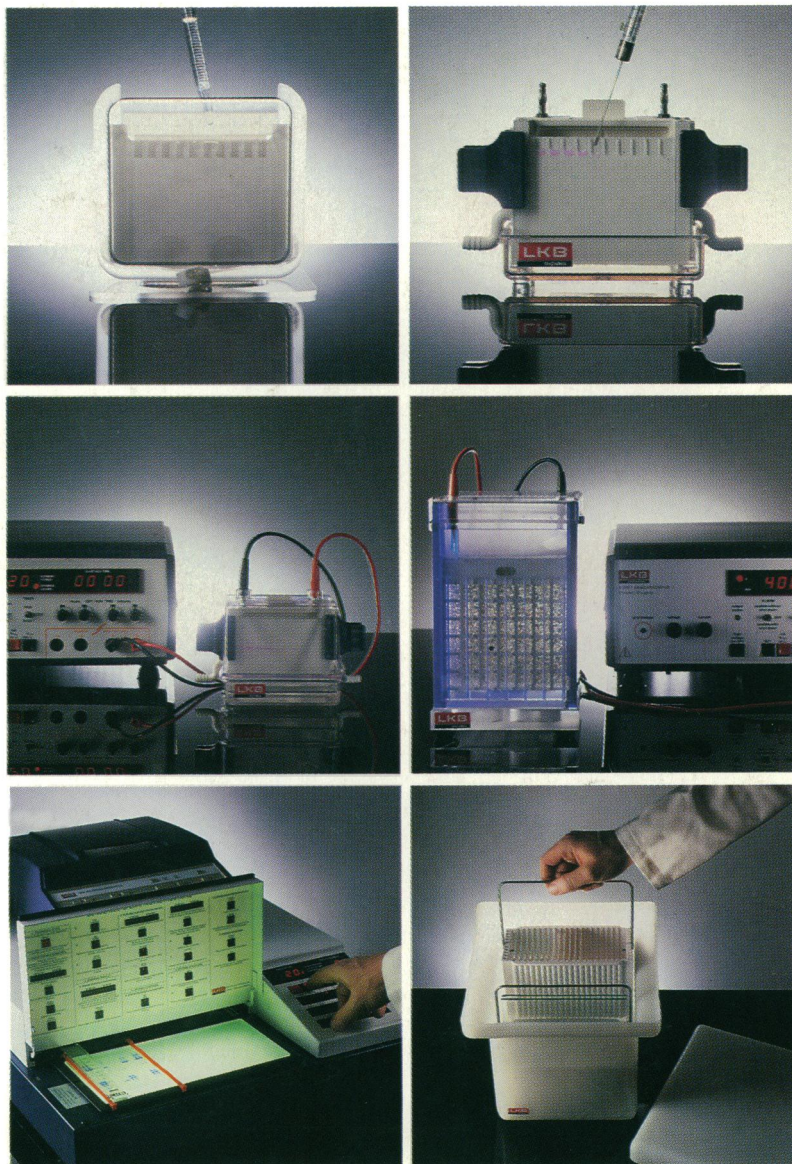
# Gel size is only a small part of a complete Midget System

Many laboratories have discovered that small gels offer big advantages over conventional electrophoretic gels. With smaller gels, you can simplify routines and improve the economy of electrophoretic runs.

Many researchers believe, however, that small gels compromise their demands for quality and performance. Not so. The LKB Midget Electrophoresis System offers the advantages inherent in smaller gels—reduced buffer and reagent consumption, increased resolution, and shorter run times—as well as the kind of results you would expect from larger gels. With Midget, you can streamline your needs to match your budget. A complete Midget system includes everything for casting, running, transfer and scanning—all reasonably priced.

A complete Midget System lets you precast batches of up to 14 reproducible gels in the compact format of 8×10 cm. You can run zone, discontinuous, gradient, SDS and even 2-D tube gel electrophoresis—simply and efficiently. A complete Midget System lets you rapidly and economically transfer proteins onto a blotting membrane. And with a complete Midget System you can obtain the impartial evaluation capabilities of laser scanning. The system even includes a plate cleaning and storage unit.

So why compromise when the advantages of a Midget System are so sizeable?



380

**LKB**

Electrophoresis Division

LKB-Produkter AB, Box 305, S-16126 Bromma, Sweden, Tel. 08-799 80 00, telex 10492

Antwerp (03)218 93 35 • Athens-Middle East +30 (1) 894 73 96 • Beijing 89 06 21 • Copenhagen (01) 29 50 44 • HongKong (852) 5-814 84 21  
London (01) 657 88 22 • Lucerne (041) 57 44 57 • Madras (044) 45 28 74 • Moscow (095) 255-6984 • Munich (089) 85 830 • Paris (01) 64 46 36 36  
Rome (06) 39 90 33 • Sao Paulo (011) 578 41 38 • Stockholm (08) 764 75 50 • Tokyo (03) 293-5141 • Turku (021) 678 111 • Vienna +43 (222) 92 16 07  
Washington (301) 963 3200 • Zoetermeer (079) 3192 01 Over 60 qualified representatives throughout the world.

Circle No. 112 on Readers' Service Card