

on identical scales; there is in fact no significant difference in annual temperature change between their subpolar and tropical sites (t test, $p > .05$).

The final chapter of the volume is one of the few attempts in the literature to apply the comparative approach to the study of seals and to integrate aspects of their behavior, physiology, and ecology; it is valuable for these reasons. Still, it contains more compilation than synthesis, including unnecessary repetition of figures from earlier chapters.

Given the recent interest in the ecological implications of body size in mammals generally, it is unfortunate that the authors did not pursue this matter further, especially given that the two species of otariid seals living in the most unpredictable (in terms of annual productivity) environment studied are smaller than close relatives living in more predictable environments. It might also have been more interesting to attempt to explain differences in population density than differences in absolute abundance of the species considered. Finally, in a book on maternal strategies that attempts to integrate observation and theory, failure to discuss observed differences in maternal investment in individual sons and daughters in relation to recent theories of parental investment is an opportunity missed.

Seal biology, as evidenced by this work, still shows all the traits of a young science; it remains largely inductive in approach and descriptive in nature, with new understanding emerging more through serendipity than design and reference to theory often merely a post hoc exercise. Yet it is clear that this monograph, and the pioneering approach it describes, which has already yielded some valuable and unexpected results, will provide further stimulus for using pinnipeds as vehicles for testing hypotheses generated by ecological and evolutionary theories, thereby bringing more field studies of these fascinating yet elusive mammals into the mainstream of modern biology.

D. M. LAVIGNE

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Some Other Books of Interest

Hormones, Receptors and Cellular Interactions in Plants. C. M. CHADWICK and D. R. GARROD, Eds. Cambridge University Press, New York, 1986. xii, 375 pp., illus. \$69.50. Intercellular and Intracellular Communication, 1.

Noting that the study of ligand-receptor interactions is less well advanced for plant than for animal systems, Chadwick and Gar-

rod have compiled a volume the aim of which is "to take a broad look at the current status of [such] interactions in a variety of higher and lower plant systems" in the hope of providing "a cross-fertilization of ideas and a stimulus to research." The work opens with chapters on auxin, ethylene, and gibberellin receptors (Libbenga *et al.*, Hall, and Stoddart), which are followed by a discussion of cyclic AMP in higher plants (Newton and Brown). Receptors in slime molds are the subject of the next two chapters (Newell, Chadwick *et al.*). Further chapters deal with the plasma membrane of higher plant protoplasts (Fowke), yeast mating (Ballou and Pierce), pollen-stigma interactions as studied in *Brassica oleracea* (Dickinson and Roberts), host-pathogen interactions (Ralton *et al.*), attachment of *Rhizobium* to legume root hairs (Dazzo), and functions of plant lectins (Holden and Yeoman). Each chapter has its own reference list, and the book includes a subject index.

The volume inaugurates a series to be published under the general editorship of B. Cinader. The second volume will be devoted to receptors in tumor biology.—K.L.

Wetlands. WILLIAM J. MITSCH and JAMES G. GOSSELINK. Van Nostrand Reinhold, New York, 1986. xvi, 539 pp., illus. \$44.50.

In this volume the authors have set out to fill a need for "a comprehensive reference [for] scientists, engineers, and planners involved in the management of wetlands and . . . a textbook for students and professors for newly evolving courses on wetland ecology." The book is intended for an audience with some background in ecology and emphasizes, though does not limit itself to, North American wetlands. The opening section gives some history of wetland use, outlines the distinguishing features of wetlands, defines the various types, and describes their status and distribution in the United States. Part 2, entitled The Wetland Environment, contains chapters on hydrology, geochemistry, biological adaptations, and ecosystem development. Parts 3 and 4 are devoted to particular types of wetland ecosystems—tidal salt and freshwater marshes, mangrove wetlands, inland freshwater marshes, northern peatlands and bogs, southern deepwater swamps, and riparian wetlands. Part 5 takes up such practical issues as the valuation of wetlands, strategies of and laws bearing on wetland management, and classification and inventorying of wetlands. A list of nearly 700 references and a 21-page index conclude the volume.

—K.L.

Books Received

Applied Classical Electrodynamics. Vol. 2, Non-linear Optics. F. A. Hopf and G. I. Stegeman. Wiley-Interscience, New York, 1986. x, 187 pp., illus. \$27.50. Wiley Series in Pure and Applied Optics.

Are Australian Ecosystems Different? J. R. Dodson and M. Westoby, Eds. The Ecological Society of Australia [no place], 1985 (distributor, Blackwell Scientific, Carlton, Australia). iv, 250 pp., illus. Paper, \$A25. Proceedings of the Ecological Society of Australia, vol. 14. From a symposium, Sydney, Aug. 1984.

Assessing the Nuclear Age. Selections from the *Bulletin of the Atomic Scientists*. Len Ackland and Steven McGuire, Eds. Educational Foundation for Nuclear Science, Chicago, 1986 (distributor, University of Chicago Press, Chicago). xviii, 382 pp., illus. \$29.95; paper, \$12.95.

Authority, Liberty, and Automatic Machinery in Early Modern Europe. Otto Mayr. Johns Hopkins University Press, Baltimore, 1986. xviii, 265 pp., illus. \$30. Johns Hopkins Studies in the History of Technology.

Averting Catastrophe. Strategies for Regulating Risky Technologies. John G. Morone and Edward J. Woodhouse. University of California Press, Berkeley, 1986. x, 215 pp., illus. \$17.95.

Basic Mechanisms of the Epilepsies. Molecular and Cellular Approaches. Antonio V. Delgado-Escueta *et al.*, Eds. Raven, New York, 1986. xxiv, 1096 pp., illus. \$98.50. Advances in Neurology, vol. 44. Based on meetings, San Diego, CA, Dec. 1983, and Santa Ynez Mountains, CA, Dec. 1982.

Basic Toxicology. Fundamentals, Target Organs, and Risk Assessment. Frank C. Lu. Hemisphere, New York, 1985. xvi, 276 pp., illus. \$49.95.

Biochemistry and Biology of Plasma Lipoproteins. Angelo M. Scanu and Arthur A. Spector, Eds. Dekker, New York, 1986. xii, 514 pp., illus. \$107.50. The Biochemistry of Disease, vol. 11.

Chemotherapy of Malaria. R. H. Black *et al.* L. J. Bruce-Chwatt, Ed. 2nd ed. World Health Organization, Geneva, 1986 (U.S. distributor, WHO Publications Center, Albany, NY). vi, 262 pp., illus. Paper, SwF 44. World Health Organization Monograph Series, no. 27.

Clinical Trials. Design, Conduct, and Analysis. Curtis L. Meinert in collaboration with Susan Tonascia. Oxford University Press, New York, 1986. xxvi, 469 pp., illus. \$75. Monographs in Epidemiology and Biostatistics, vol. 8. Intended as "a general reference for practitioners of clinical trials," with "the main focus on trials involving uncrossed treatments and a clinical event as the outcome measure."

The Development of Social Welfare. John W. Landon. Human Sciences Press, New York, 1986. 210 pp. \$24.95.

Developmental Behavioral Pharmacology. Vol. 5. Norman A. Krasnegor, David B. Gray, and Travis Thompson, Eds. Erlbaum, Hillsdale, NJ, 1986. xiv, 310 pp., illus. \$36. Advances in Behavioral Pharmacology. Based on a conference, Leesburg, VA, Aug. 1983.

Disordered Systems and Biological Organization. E. Bienenstock, F. Fogelman Soulié, and G. Weisbuch, Eds. Springer-Verlag, New York, 1986. xxii, 405 pp., illus. \$72.50. NATO Advanced Science Institutes Series F, vol. 20. From a workshop, Les Houches, France, Feb. 1985.

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Electromagnetic Surface Excitations. R. F. Wallis and G. I. Stegeman, Eds. Springer-Verlag, New York, 1986. x, 305 pp., illus. \$45. Springer Series on Wave Phenomena, 3. From a summer school, Erice, Italy, July 1985.

Immunology and Epidemiology. G. W. Hoffmann and T. Hrabá, Eds. Springer-Verlag, New York, 1986. viii, 242 pp., illus. Paper, \$20.50. Lecture Notes in Biomathematics, vol. 65. From a conference, Mogilany, Poland, Feb. 1985.

Induced Circular Dichroism in Biopolymer-Dye Systems. M. Hatano. S. Okamura, Ed. Springer-Verlag, New York, 1986. xiv, 135 pp., illus. \$49. Advances in Polymer Science, 77.

Integral Methods in Science and Engineering. Fred R. Payne *et al.*, Eds. Hemisphere (Harper and Row), New York, 1986. x, 653 pp., illus. \$95.50. From a conference, Arlington, TX, March 1985.

International Review of Cytology. G. H. Bourne, J. F. Danielli, and K. W. Jeon, Eds. Vol. 99, Molecular Approaches to the Study of Protozoan Cells. K. W. Jeon, Ed. Academic Press, Orlando, FL, 1986. xii, 354 pp., illus. \$52.

Introduction to Computer Systems. A User-View. Brian Molinari. Cambridge University Press, New York, 1985. xiv, 274 pp., illus. \$39.50; paper, \$14.95. Cambridge Computer Science Texts, 21.

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An Introduction to the Theory of Seismology. K. E. Bullen and Bruce A. Bolt. 4th ed. Cambridge University Press, New York, 1985. xviii, 499 pp., illus. \$69.50; paper, \$24.95.

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Libraries and Information Science in the Electronic Age. Hendrik Edelman, Ed. ISI Press, Philadelphia, 1986. xvi, 177 pp. \$39.95. Samuel Lazerow Memorial Lecture Series, 1983-85.

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Machine Learning. A Guide to Current Research. Tom M. Mitchell, Jaime G. Carbonell, and Ryszard S. Michalski, Eds. Kluwer, Boston, 1986. xvi, 429 pp., illus. \$39.95. Kluwer International Series in Engineering and Computer Science. Knowledge Representation, Learning and Expert Systems. Based on a workshop, Skytop, PA, June 1985.

The Making of Great Men. Male Domination and Power Among the New Guinea Baruya. Maurice Godelier. Cambridge University Press, New York, and Editions de la Maison des Sciences de l'Homme, Paris, 1986. xvi, 255 pp., illus. \$49.50; paper, \$15.95. Cambridge Studies in Social Anthropology, 56. Translated from the French edition (Paris, 1982) by Rupert Swyer.

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Retroviruses and Human Pathology. Robert C. Gallo, Dominique Stehelin, and Oliviero E. Varnier,

(Continued on page 1212)

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Literature

Electrical Connectors gives specifications and ratings for a line of connectors, binding posts, and test probes for many applications. Superior Electric. Circle 532.

Lasers is a product guide that describes argon, krypton, and argon-krypton lasers. Laser Ionics. Circle 555.

UV-VIS Spectrophotometer describes Response, a scanning instrument that is menu-driven. It features graphic and tabular display that may be output to a computer. Ciba Corning Diagnostics, Gilford Systems. Circle 548.

Bioreactor is devoted to CelliGen for laboratory and large-scale culture. The device permits one to grow mass quantities of shear-sensitive cells in a sparged medium with high oxygen transfer rates. New Brunswick Scientific. Circle 549.

Nuclear Instruments and Systems describes 53 products for researchers in nuclear or x-ray measurement. EG&G Ortec. Circle 553.

(Continued from page 1210)

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The Suicidal Child. Cynthia R. Pfeiffer. Guilford, New York, 1986. xviii, 318 pp., illus. \$29.95.

Suncell. Energy, Economy, Photovoltaics. Christopher C. Swan. Sierra Club Books, San Francisco, 1986 (distributor, Random House, New York). viii, 231 pp., illus. \$17.95.

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Supramolecular Structure and Function. Greta Pifat-Mrzljak, Ed. Springer-Verlag, New York, 1986. viii, 191 pp., illus. \$54. Proceedings in Life Sciences. From a school, Dubrovnik, Croatia, Sept. 1984.

Surface Topology. P. A. Firby and C. F. Gardiner. Horwood, Chichester, England, and Halsted (Wiley), New York, 1986. 216 pp., illus. Paper, \$29.95. Ellis Horwood Series in Mathematics and Its Applications. Reprint, 1982 ed.

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The Tender Ship. Governmental Management of Technological Change. Arthur M. Squires. Birkhäuser, Boston, 1986. xxii, 247 pp., illus. \$24.95. A *Pro Scientia* Viva Title.

A Textbook of Human Biology. J. K. Inglis. 3rd ed. Pergamon, New York, 1986. xvi, 422 pp., illus. \$29; paper, \$18.75. Pergamon International Library of Science, Technology, Engineering and Social Studies.

Time Frames. The Rethinking of Darwinian Evolution and the Theory of Punctuated Equilibria. Niles Eldredge. Simon and Schuster, New York, 1986. 240 pp., illus. Paper, \$8.95. A Touchstone Book.

Toxic Metals in the Atmosphere. Jerome O. Nriagu and Cliff I. Davidson, Eds. Wiley-Interscience, New York, 1986. xiv, 635 pp., illus. \$99.95. Wiley Series in Advances in Environmental Science and Technology, vol. 17.

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The Vikings and America. Erik Wahlgren. Thames and Hudson, New York, 1986 (distributor, Norton, New York). 192 pp., illus. \$22.50. Ancient Peoples and Places, vol. 102.

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Wave Interactions and Fluid Flows. Alex D. D. Craik. Cambridge University Press, New York, 1986. xii, 322 pp., illus. \$59.50. Cambridge Monographs on Mechanics and Applied Mathematics.

Webb Society Deep-Sky Observer's Handbook. Vol. 1, Double Stars. Robert W. Argyle. Kenneth Glyn Jones, Ed. Illustrated by John Lewis. Enslow, Hillsdale, NJ, 1986. xxii, 165 pp. Paper, \$13.95.

What Is Intelligence? Contemporary Viewpoints on Its Nature and Definition. Robert J. Sternberg and Douglas K. Detterman, Eds. Ablex, Norwood, NJ, 1986. viii, 173 pp., illus. \$29.50; paper, \$18.50.

X-Linked Mental Retardation 2. John M. Opitz, James F. Reynolds, and LaVelle M. Spano, Eds. Liss, New York, 1986. xvi, 758 pp., illus. \$64. From a workshop, Dunk Island, Australia, Aug. 1985. Reprinted from *American Journal of Medical Genetics*, vol. 23, no. 1/2 (1986).

Personnel Placement

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POSITIONS WANTED

Entomologist/Agroecologist (Ph.D. Entomology): Six years of experience in field research and teaching in biological control, agroecology, and pest management. Interest in sustainable agriculture. Seeks research, teaching, or consulting position in academia/industry. R. L. Bugg, 233 Hatchville Road, East Falmouth, MA 02536. X

Environmental/Organic Chemist Ph.D. 1980. Experience in pesticide research, biochemistry, environmental fate, toxicology, data analysis, and hazardous waste. Knowledgeable of regulatory process. Excellent skills in communication with laymen/policy makers. Looking for regulatory, administrative, advocacy, or technical interpretation position in government, public interest group, or industry. Salary flexible. Box 157, SCIENCE. 9/12, 19

Goal-Oriented R&D Executive: Science and business education. Experience managing R&D groups; strategic chemical and biotech R&D planning for **Fortune 100** company. Seeks opportunity to make full use of management, technical, and computer skills to get and use R&D results. Box 158, SCIENCE. X

Laboratory Technician: M.A. 1985: Physiology/biochemistry. Thesis research: radioassay of NADase activity from endometrium of hormone treated ovariectomized rats. Seven years of laboratory experience. Seeking full-time position with educational opportunities. Jack Braley, 816 East Cleveland, Ponca City, OK 74601. 9/12, 19

M.D., Ph.D. Many years of research experience, directing metabolic and genetic laboratory. Teaching, publications, and patient care. Seeks position in Genetics and Pediatric Department. Board-certified, training in biochemistry and pediatrics. Prefer medical school affiliation. Box 154, SCIENCE. X

Scientist-Inventor-Researcher. Ph.D. 1975. Postdoctoral 1978. Patents, publications in diverse fields. Outstanding technical leader. Excellent communication skills, problem-solver. Research team builder and leader. Experience in industry, government and academia directing R&D programs, developing and patenting sophisticated analytical instruments, and developing methods and procedures. Creative, innovative. Seeking challenging research position. Box 159, SCIENCE. 9/12, 19

Toxicologist, Ph.D. (M.S. industrial hygiene): Experienced in animal surgery, clinical chemistry, in vitro models, radioisotopes, electrophoresis, and histochemistry. Seeks industrial position. Box 160, SCIENCE. 9/12, 19, 26

POSITIONS OPEN

ASSISTANT PROFESSORS OF PSYCHOLOGY (TENURE-TRACK)

The Department of Psychology at Oregon State University, Corvallis, is seeking at least three individuals to replace retiring faculty. These tenure-track appointments will be made at the level of assistant professor starting 16 September 1987. While candidates with an earned doctorate from any specialty area in psychology will be considered, those with demonstrated teaching and research expertise in the following areas will be given priority: social, developmental, motivation, emotion, personality, and measurement.

The Department of Psychology offers an undergraduate degree and participates in the university multidisciplinary master's degree program. New faculty will be expected to provide quality instruction and advising to our undergraduate majors and develop a research program in their specialty area. Complete application including a letter of application, curriculum vitae, three letters of reference, copies of recent publications, and evidence of teaching effectiveness must be received by 1 February 1987. Send materials to: **William P. Smotherman, Personnel Committee Chair, Department of Psychology, Oregon State University, Corvallis, OR 97331. Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

ANATOMY-PHYSIOLOGY: Tenure-track position at the assistant professor level for January 1987. Applicants must have a Ph.D. and research experience. Teaching responsibilities include an introductory course in human anatomy-physiology. The successful candidate would be expected to develop their own research program, however, opportunities are available for collaborative research with an In Vitro Fertilization Program and Andrology Laboratory. Send curriculum vitae, summaries of current and proposed research, and names of three references by 1 October 1986 to: **Dr. Harold G. Marshall, Department of Biological Sciences, Old Dominion University, Norfolk, VA 23508.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

AQUATIC CHEMIST: Full-time position to provide technical support for the Environmental Protection Agency (EPA) National Surface Water Survey. Successful applicant will assist with data interpretation, preparation of technical publications, quality assurance, and field and laboratory methods development. Applicants must have a Ph.D. in chemistry, limnology, or a related field and experience writing technical publications. Salary is negotiable. Send résumé, three letters of reference, and reprints (if available) by 30 September 1986 to: **John Baker, Lockheed-EMSCO, Acid Deposition Program, 1050 East Flamingo, Suite 209, Las Vegas, NV 89109.** *Lockheed is an Affirmative Action/Equal Opportunity Employer, M/F/H/V.*

UNIVERSITY OF FLORIDA

ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR, PROFESSOR. The Department of Immunology and Medical Microbiology at the University of Florida invites applications for tenure-track appointments from individuals using modern molecular, genetic, and biochemical technology to address questions related to gene structure/function in either prokaryotes or eukaryotes. Persons interested in parasitology, immunology, developmental biology, mechanisms of microbial pathogenesis, and virology are particularly encouraged to apply, although consideration will be given to outstanding applicants regardless of field. Applicants should hold the Ph.D., M.D., or equivalent degree and have postdoctoral training. Tentative starting date, fall 1987. The rank of appointee is commensurate with education, training, and experience. The Department of Immunology and Medical Microbiology has begun a phase of expansion which will reach maturity when new research facilities become available in the near future. Applicants should submit a curriculum vitae, present and future research plans, and the names of three references to: **Dr. William W. Hauswirth, Chairman, Search Committee, Department of Immunology and Medical Microbiology, Box J-266, JHMHC, College of Medicine, University of Florida, Gainesville, FL 32610.** The recruiting deadline is 15 December 1986. *Equal Employment Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF FOREST BIOLOGY. Tenure-track, available 1 March 1987. Ph.D., research competence in biotechnology required. Ability to communicate with silviculturists necessary; one degree in forestry preferred. Responsibilities: research in biotechnology with application to forest management, teaching, and advising. Send résumé, transcripts, summary of research interests, and three reference letters by 1 November 1986 to: **Dr. Mohn, Department of Forest Resources, University of Minnesota, St. Paul, MN 55108.** *The University of Minnesota is an Equal Opportunity Educator and Employer, and specifically invites and encourages applications from women and minorities.*

ASSISTANT PROFESSOR. The Allergic Disease Center, Creighton University is seeking an outstanding biochemical pharmacologist with research interests and expertise in the areas of smooth muscle pharmacology, ion channels, and mediators of inflammation. Applicants should have a Ph.D. with 2 to 5 years of postdoctoral experience in biochemical pharmacology and a record of research accomplishment. Salary range \$26,000 to \$32,000. Qualified applicants should submit curriculum vitae and three letters of reference by 1 October 1986 to: **Dr. Robert G. Townley, Chief, Allergic Disease Center, Creighton University School of Medicine, Omaha, NE 68178.**

POSITIONS OPEN

ASSISTANT CURATOR IN SYSTEMATIC HERPETOLOGY

The Department of Herpetology, California Academy of Sciences, announces the opening of an entry-level, 3-year, contract assistant curator position, renewable for an additional 2 years. Ph.D. required, and demonstrated research program in systematic herpetology. Deadline for applications: 15 November 1986; starting date: 1 January 1987. Applications including complete curriculum vitae and five references with telephone numbers should be sent to: **Dolores Rogers, Personnel Department, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118.** Inquiries to: **Dr. Robert C. Drewes, Chairman, Department of Herpetology, telephone: 415-750-7034.**

Yale University, The Department of Chemistry, invites applications for several positions at the ASSISTANT PROFESSOR LEVEL, effective academic year 1987. We seek bright teacher-scholars who show promise for developing outstanding research programs in organic chemistry (especially bioorganic), inorganic chemistry (especially bioinorganic), and experimental and theoretical physical chemistry.

Applicants should send curriculum vitae, a statement of research interests and plans, and should arrange for the submission of three letters of recommendation. All materials should be received by 15 November 1987. Send application to: **Professor Stuart Schreiber, Chairman, Faculty Search Committee, Department of Chemistry, Yale University, 225 Prospect Street, P.O. Box 6666, New Haven, CT 06511.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF) DEPARTMENT OF LABORATORY MEDICINE

Applications are invited for the following positions involved in a Transfusion Medicine Research Program directed by **Dr. Girish N. Vyas.** The projects are related to viral hepatitis, AIDS and host immune response. Starting date for all positions is fall 1986.

ASSISTANT/ASSOCIATE PROFESSOR M.D./Ph.D. molecular virologist, preferably with experience in hepatitis work (\$34,600 to \$68,900).

ASSISTANT RESEARCH MOLECULAR BIOLOGIST Ph.D. with research experience in nucleic acid analysis (\$34,600 to \$40,700).

ASSISTANT RESEARCH IMMUNOLOGIST Ph.D. molecular immunologist with experience in immune complex research (\$34,600 to \$40,700).

STAFF RESEARCH ASSOCIATE II B.S./M.S. senior technician to perform research involving tissue culture, virology, and immunologic assays. Three SRA II positions are open (\$23,652 to \$28,451).

Applicants should send curriculum vitae, plus a list of three references to:

**Joan Arenius
Project Administrator
Box 0100, Department of Laboratory Medicine
University of California, San Francisco
San Francisco, CA 94143**

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

ASSISTANT PROFESSOR, BIOPHYSICAL SCIENCES, State University of New York at Buffalo. Tenure-track position with primary responsibility for direction of an undergraduate program in biophysics. Teaching medical students and training of graduate students also required. Candidates must have substantial teaching experience or other evidence for skill in teaching. Additional evidence for capability in academic leadership, especially in a biomedical environment highly desirable. Applicants must have four or more years of postdoctoral experience, a currently supported program of research, and other evidence of nationally recognized research capability in a prominent area of biophysics. The successful candidate will be expected to pursue an actively funded research program that interacts with ongoing departmental research efforts. Applications should be addressed to: **C. R. Zobel, Department of Biophysical Sciences, 118 Cary Hall, State University of New York at Buffalo, Buffalo, NY 14214,** and be received by 6 October 1986. *SUNY/Buffalo is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology of the East Carolina University School of Medicine invites applications for a tenure-track position at the assistant professor level. Research areas of interest to the department include toxicology, immunopharmacology, cardiovascular, neuropharmacology, and drug metabolism. Applicants should have either the Ph.D., M.D., or the combination and 2 years of postdoctoral experience and be committed to developing and/or maintaining an active, independent research program. Applicants are requested to submit curriculum vitae and the names of three references by 15 October 1986 to: **Dr. W. R. Wooles, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27834.**

ASSISTANT/ASSOCIATE PROFESSORS

Department of Physiology and Biophysics The University of Iowa College of Medicine CELLULAR ELECTROPHYSIOLOGY

Applications are invited for a new tenure-track position from individuals with a strong record of research involving electrophysiological studies of cell membranes. Our interests include, but are not limited to, individuals using patch and whole cell voltage clamp techniques to study cellular and molecular mechanisms underlying development and regulation of excitability.

CELLULAR NEUROPHYSIOLOGY

Applications are invited for a new tenure-track position from individuals with a strong record of research in molecular and/or cellular neurophysiology. Our interests include, but are not limited to, individuals using current strategies of cell and molecular biology to study the development and regulation of neuronal and/or glial function.

Please send curriculum vitae, description of research plans, and three letters of reference to: **Dr. Robert E. Fellows, Chairman, Department of Physiology and Biophysics, The University of Iowa, Iowa City, IA 52242.**

The University of Iowa is an Equal Opportunity/Affirmative Action Employer

BROWN UNIVERSITY ASSISTANT PROFESSOR OF MEDICAL SCIENCE PHYSIOLOGY/BIPHYSICS

The Division of Biology and Medicine is seeking a cell physiologist with research interests in the regulation (in animals) of ion channels, intracellular signalling, or cell volume. An M.D., Ph.D., or equivalent degree and 2 years of postdoctoral experience are required for this tenure-track position. The successful candidate is expected to develop an independent, externally funded research program. The division is responsible for teaching medical, graduate, and undergraduate students; joint programs with other departments include one with applied mathematics. The successful candidate will teach in the mammalian physiology course and in a course in the area of his or her specialization. Undergraduate advising is a regular obligation of faculty members. The appointment will begin on or about 1 July 1987.

Applicants should submit curriculum vitae and a concise description of research plans by 30 November 1986 and should arrange for three letters of reference to be sent to: **Dr. Leon Goldstein, Section of Physiology/Biophysics, Box G, Brown University, Providence, RI 02912.** We encourage applications from women and minority candidates. *Brown University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Chemistry of the University of Chicago invites applications from outstanding individuals for ASSISTANT PROFESSOR (tenure-track) FACULTY POSITIONS in physical chemistry and in inorganic chemistry. Postdoctoral experience is preferred. Applicants should submit curriculum vitae, a list of publications, a succinct outline of their research plans, and should arrange for three letters of recommendation to be sent to: **Professor Leon M. Stock, Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, IL 60637.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF ILLINOIS AT CHICAGO COLLEGE OF MEDICINE

THE DEPARTMENT OF BIOLOGICAL CHEMISTRY is seeking applications for a tenure-track assistant/associate professor position, effective academic year 1986. Applicants should have a Ph.D. and at least 2 years of postdoctoral experience. We are seeking candidates with a strong commitment to developing an independent research program using contemporary approaches to fundamental problems in biochemistry. The department is well equipped and well funded, having 22 full-time faculty members. The department is particularly strong in nucleic acid structure-function and gene regulation, membrane and cellular biochemistry, and lipid metabolism. Applicants should provide curriculum vitae, at least three letters of reference, and a brief statement of research interests and plans by 1 December 1986. Send applications to: **Secretary, Biochemistry Search Committee, Department of Biological Chemistry, University of Illinois at Chicago, College of Medicine, 1853 West Polk Street, Chicago, IL 60612.**

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

ASSISTANT PROFESSORS OF MICROBIOLOGY AND IMMUNOLOGY UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE

The Department of Microbiology and Immunology, as part of a process of growth and increase in activity is seeking to fill several positions at the level of assistant professor (tenure-track; associate professor candidates will also be considered) in prokaryotic molecular biology, broadly defined. Candidates involved in protein engineering would be particularly welcome. Each individual will be expected to develop a strong, independent research program with external funding. Adequate space and start-up funds are available. Participation in teaching and graduate student training is expected.

Applicants should provide the search committee with curriculum vitae, at least three letters of recommendation, and a brief statement of future research interests and plans. The first series of candidates will be considered after 15 October 1986, and applications will be accepted until the positions are filled. Starting dates can be September 1987, or thereafter.

Send applications to: **Drs. A. M. Chakrabarty, Philip Matsumura and Simon Silver, Prokaryotic Molecular Biology Search Committee, Department of Microbiology and Immunology, University of Illinois College of Medicine at Chicago, P.O. Box 6998, Chicago, IL 60680.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

OPEN RANK FACULTY POSITION. **The Department of Chemistry** anticipates filling an open rank, tenure-track faculty position in organic chemistry. Applicants for this position must be committed to excellence in research and teaching. Junior level candidates must have a minimum of a Ph.D. in chemistry. Postdoctoral experience, while desirable, is not essential. Senior level candidates must demonstrate a consistently excellent record of scientific achievement and a pattern of active participation in the scientific community. The person selected will be expected to provide a strong impetus in enhancing the research and teaching programs of the department. The candidate's thesis or subsequent experience should have involved an area of modern organic chemistry. All else being equal, the area of specialization should complement those of current faculty.

Junior level candidates should send a complete curriculum vitae which includes a description of future research plans, a documented summary of past accomplishments, and arrange to have at least three letters of recommendation sent to: **Chairman, Search Committee, Department of Chemistry, State University of New York at Buffalo, Buffalo, NY 14214.** The deadline for application is 1 October 1986.

The Department of Chemistry is particularly interested in considering the applications of women, ethnic minorities, or handicapped persons. The State University of New York is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSORSHIPS. **The Department of Chemistry** seeks to fill faculty openings in analytical, inorganic, and physical chemistry. Applicants for these tenure-track positions must be committed to excellence in research and teaching. The successful candidates will teach in service and majors courses at the undergraduate level, and in their particular specialty area at the graduate level. All appointees will conduct research in their particular areas of specialization. The successful candidates will have a minimum of a Ph.D. in chemistry. Postdoctoral experience, while desirable, is not essential. (i) **ANALYTICAL CHEMISTRY**—It is preferred that the candidate's Ph.D. and/or postdoctoral experience, and research interests, be in some form of chemical separation, or hybrid thereof, such as chromatography-mass spectroscopy, or in some other area of spectroscopy. Consideration will also be given to others whose research interests complement those of the present faculty in the analytical area. (ii) **INORGANIC CHEMISTRY**—The candidate's doctoral thesis work, or subsequent postdoctoral experience, should have involved an area of modern inorganic chemistry. Strong preference will be accorded to candidates whose research complements rather than duplicates that currently present in the department. (iii) **PHYSICAL CHEMISTRY**—Either the candidate's doctoral thesis work, or subsequent postdoctoral experience, should have involved an area of modern physical chemistry. Strong preference will be given to candidates with interests in solid-state physical chemistry and/or chemical physics.

Candidates should send a complete curriculum vitae which includes a description of future research plans, a documented summary of past accomplishments, and arrange to have at least three letters of recommendation sent to: **Chairman, Search Committee, Department of Chemistry, State University of New York at Buffalo, Buffalo, NY 14214.** The deadline for application is 1 October 1986. *The State University of New York is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSORSHIP, tenure-track, for a neuroscientist capable of developing and teaching upper-level undergraduate courses in neurochemistry/neuropharmacology and neurophysiology, participating in other neuroscience and psychology courses, and advising senior theses. Ph.D. required. Teaching experience desirable. The neuroscience program is an interdisciplinary program involving the Psychology, Chemistry, and Biology Departments. A breadth of interests appropriate to a liberal arts college setting and continuing scholarly involvement are expected. Total compensation is highly competitive. Send curriculum vitae, graduate transcript, and three letters of recommendation to: **William E. Edmonston, Jr., Ph.D., Department of Psychology, Colgate University, Hamilton, NY 13346.** *Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF FLORIDA—Seeks **ASSISTANT RESEARCH SCIENTIST** in Division of Endocrinology/Metabolism to investigate regulation of HMG CoA reductase/lipoprotein receptors in human cells. Emphasis on endocrine/growth factor control of enzyme/receptor activity/function in freshly isolated, cultured cells, and cholesterol metabolism in normal/dyslipoproteinemic states. Background in enzymology/lipoprotein biochemistry/receptor biology desired. Recruiting deadline: 31 October 1986, starting date: 14 November 1986. Send résumé to: **Peter W. Stacpoole, M.D., University of Florida, Box J226 JHMH, Gainesville, FL 32610.**

An Equal Employment Opportunity/Affirmative Action Employer.

ASSOCIATE SCIENTIST PLANT MOLECULAR BIOLOGY

Northrup King Co., a leading international seed company, is seeking an associate scientist for its molecular genetics research group. Qualified candidates must have an M.S. degree in molecular biology or related fields, and several years of experience in gene cloning and restriction mapping. Work includes random library development and genetic mapping of plant lines.

Northrup King Co. offers a competitive salary and benefit package. Please submit résumé in confidence to:

**Dr. Tim Murphy
Molecular Genetics Research
Northrup King Co.
Stanton, MN 55081**

Equal Opportunity Employer

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) SCHOOL OF MEDICINE DEPARTMENT OF OPHTHALMOLOGY JULES STEIN EYE INSTITUTE

We are seeking applicants for an **ASSISTANT PROFESSORSHIP** in the neurophysiology of the visual and/or ocular motor systems. Candidates should have earned a Ph.D. in an appropriate field and have had at least 2 years of postdoctoral experience. Expertise in electrophysiologic, psychophysical, and/or anatomic techniques in trained animals is desirable. Opportunity is available to interact with ongoing, clinical studies of the ocular motor system.

Curriculum vitae, summary of research goals, and names of references should be sent to: **Robert D. Yee, M.D., Division of Neuro-Ophthalmology, Jules Stein Eye Institute, 800 Westwood Plaza, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

The Department of Biology, Georgia State University, anticipates a tenure-track **ASSOCIATE PROFESSOR** position for January 1987, to assist in the development of a behavioral biology program. Applicants should have the Ph.D. degree in either biology or psychology. They should have experience in conducting behavioral research with great apes that explicates the foundations and processes of learning, language development, and communication. Applicants should have strong records in competing successfully for grants or contracts and should have established national reputations as productive researchers with the great apes. Salary will be commensurate with qualifications. Applications, including curriculum vitae, reprints, a statement of research plans, and three letters of reference should be sent to: **Chairman, Department of Biology, Georgia State University, Atlanta, Georgia 30303.** Deadline for receipt of application is 20 October 1986. *Georgia State University, a unit of the University System of Georgia, is an Equal Educational Opportunity Institution and is an Equal Opportunity/Affirmative Action Employer in compliance with Title IX and other Civil Rights Laws.*

BIOLOGY EDUCATION

The School of Sciences, Southern Illinois University at Edwardsville (SIUE) invites applications and nominations for a tenure-track position at the **assistant professor** level. The individual filling this position will have primary responsibility for the activities of the Department of Biological Sciences in the area of science education, including teaching a methods course, supervising student teachers, offering workshops and summer institutes, and maintaining liaison with science teachers in the SIUE area.

Candidates must have a Ph.D. or equivalent degree in a biological science, as well as training and experience in science education. The successful candidate will be expected to engage in research in science education and may teach biology courses in his/her area of expertise.

Applicants are requested to submit transcripts, curriculum vitae, three letters of recommendation, and a statement of professional interests and/or research plans to: **Search Committee, Biology Department, Box 1651, Southern Illinois University at Edwardsville, Edwardsville, IL 62026.** Closing date for receipt of applications is 1 December 1986, or until position is filled.

Southern Illinois University at Edwardsville is an Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGIST

The Biology Department of Wesleyan University is seeking applications for a tenure-track position at the rank of **assistant professor**. Candidates are expected to develop a strong, independent research program, supervise Ph.D. students, and participate in instruction in cell biology at the undergraduate level. Preference will be given to applicants whose research skillfully combines structural and molecular approaches. Postdoctoral experience is required. Please send curriculum vitae, three letters of recommendation, and a brief description of future research plans by 1 November 1986 to: **Search Committee, Biology Department, Wesleyan University, Middletown, CT 06457.** *Wesleyan University is an Equal Opportunity/Affirmative Action Employer. We encourage applications from minority candidates and women.*

Postdoctoral Scientist Cell Biology

The Department of Cell Biology at Smith Kline & French Laboratories, located near Valley Forge, Pennsylvania, is seeking a Cell Biologist to join a multidisciplinary team developing new therapeutic strategies for the treatment of colon carcinoma. The successful candidate will use a combination of immunological and biochemical techniques to study epithelial cell differentiation in normal, preneoplastic and neoplastic colon.

Candidates should have:

- Ph.D. in Cell, Developmental or Molecular Biology or Biochemistry.
- experience in the biological and molecular characterization of differentiating cells.
- familiarity with methodologies for establishing primary culture explants of normal and neoplastic tissues.
- 0-2 years postdoctoral experience.
- growing publication record and good communication skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your curriculum vitae and the names of three references to: Robert F. Obst, R&D Employment Consultant, SmithKline Beckman Corporation, 1566 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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ASSOCIATE EDITOR SCIENCE MAGAZINE

Editorial position available for a Ph.D. biochemist or molecular biologist with 2 or 3 years of research experience; wide general interest in biological sciences; and publications in the refereed literature. The successful candidate's initial duties will include editing manuscripts for clarity and style. Progress to wide responsibilities in manuscript selection is expected. Previous editorial experience not required. This is a full-time position in our Washington editorial office. Please submit resume with cover letter, including salary requirements, to:

Carolyn Bell
SCIENCE Magazine
1333 H Street, NW
Washington, DC 20005
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POSITIONS OPEN

BIOCHEMIST. Twelve-month, tenure-track position in the Department of Chemistry, Experiment Station Biochemistry Section, starting approximately 1 January 1987. Principally research. Rank and salary negotiable. All areas of biological chemistry will be considered. Preference for enzymology, macromolecular systems, nucleic acid chemistry, and enzymatic or hormonal regulation of growth and development. Ph.D. or equivalent required, postdoctoral training desired. Send résumé, names of three references, research interests, and brief outline of proposed future research by 1 October 1986 to: **David C. Hilderbrand, Head, Chemistry Department, South Dakota State University, P.O. Box 2202, Brookings, SD 57007.**

An Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST. The Connective Tissue Laboratory of the Department of Medicine is seeking qualified candidates for research associate and/or postdoctoral fellow. The laboratory is engaged in studies designed to explore the regulation of collagen biosynthesis and collagen gene mutations in inherited connective tissue diseases. Previous experience in protein chemistry, molecular biology, and cell culture preferred. *Duke University is an Equal Opportunity Employer.* Send résumé and names of three references to: **Sheldon R. Pinnell, M.D., Russel Kaufman, M.D., Department of Medicine, Box 3135, Duke University Medical Center, Durham, NC 27710.**

BIOCHEMIST/RESEARCH ASSOCIATE, MOLECULAR BIOLOGY: independent research using techniques of recombinant DNA technology and other methods including isolation of plasmid DNA from bacterial and cell cultures, purification of plasmid DNA using density gradient centrifugation; and analysis of oncogenes; Ph.D. required in molecular biology or biochemistry, plus 2 years of doctoral research involving recombinant DNA technology. Salary \$30,000 per year, 37 hours per week. Mail résumé to: **New York State Job Service, JO number NY8002345, 175 Remsen Street, 2nd Floor, Brooklyn, NY 11201.**

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

TWO FACULTY POSITIONS are available in the Department of Biochemistry at the level of **assistant or associate professor** for well-trained or experienced candidates in biochemistry and molecular biology/molecular genetics. The department expects to fill these positions in the spring of 1987. **Positions are open until filled.** Successful applicants will be expected to develop and/or maintain a funded research program of high quality and to participate in the graduate and professional (medical, dental, and allied health) school teaching programs of the department. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or ongoing projects to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.**

BIOLOGISTS. Three faculty positions are available in the Department of Biology, The Pennsylvania State University Commonwealth Education System. **Hazleton Campus, Hazleton, PA.** Position available January 1987. Duties include teaching general biology and basic human anatomy, physiology, and microbiology for allied health majors. **Wilkes-Barre Campus, Wilkes-Barre, PA.** Position available August 1987. Position requires teaching general biology and introductory level courses in ecology, genetics, or physiology. Microbiology background desirable. **Worthington Scranton Campus, Scranton, PA.** Position available August 1987. Preferred areas: ecology, physiology, or anatomy. Duties include teaching general biology and introductory courses in one or more of the above subject areas. Candidates must have Ph.D. degree. Continuing scholarly activity, including research and publication, will be required. Salary and rank commensurate with qualifications. Application deadline: 15 October 1986. Separate application materials are required for each position. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. William H. Neff, Box G, 208 Mueller Building, University Park, PA 16802.**

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

Applications are invited for the position of **CHAIR OF THE DEPARTMENT OF BIOCHEMISTRY, UNIVERSITY OF MISSOURI-COLUMBIA.** The department has university-wide responsibilities for undergraduate, graduate, and professional education in biochemistry, and has multifaceted research programs that relate to agriculture, medicine and the life sciences, and contribute to an interdisciplinary program in molecular biology. The successful candidate will be expected to provide leadership in all phases of the mission of the department and to cooperate with a vigorous administration to advance biochemistry toward eminent status. Candidates should be recognized as leaders in biochemical research, and have strong credentials in teaching and administration. Applications should include curriculum vitae and the names of three references. Nominations are also requested. Submit by 15 September 1986 to: **Dr. Warren L. Zahler, Chair, Search Committee, Department of Biochemistry, M121 Medical Sciences Building, University of Missouri-Columbia, Columbia, MO 65212. The University of Missouri is an Equal Opportunity/Affirmative Action Employer**

UNIVERSITY OF GUELPH EGG PRODUCERS CHAIR ENDOWED CHAIR IN EGG PRODUCTS

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

The applicant should be an innovative researcher with the expertise to investigate egg composition and use from a chemical, physical, and/or nutritional standpoint. This person must be able to interact with faculty, staff, and graduate students in various disciplines thereby serving as a catalyst to increase research activity in the area of egg products.

The chair is essentially a research position and the incumbent will be expected to develop a program that includes the supervision of graduate students, technical help, and postdoctoral fellows. In addition to research funds provided by the endowment, the incumbent will be expected to seek other outside funding to strengthen and expand the research program.

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

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

Closing date for applications is 30 November 1986. Subject to final budgetary approval.

DIRECTOR CLINICAL CYTOGENETICS LABORATORY. The Department of Pathology, Los Angeles County/University of Southern California (LAC/USC) Medical Center, Los Angeles, CA, seeks a director for its Clinical Cytogenetics Laboratory. Qualifications include a Ph.D. in cytogenetics or a related discipline and 2 years of experience in clinical cytogenetics. Experience in cancer cytogenetics is desirable. Ability to conduct an active research program and participation in the teaching activities of the Department of Pathology is expected. Academic appointment in the USC School of Medicine will be at a rate commensurate with qualifications. Applicants should send an updated curriculum vitae and at least three references to: **Edward T. Wong, M.D., Professor and Vice-Chairman of Pathology and Associate Director of Laboratories and Pathology, LAC/USC Medical Center, Room 2900GH, 1200 North State Street, Los Angeles, CA 90033-1084.** Inquiries may be directed to telephone: 213-226-7151.

Equal Opportunity Employer, M/F

POSITIONS OPEN

CHAIR, DEPARTMENT OF AGRICULTURE AND RESOURCE MANAGEMENT SPECIALISTS, Cooperative Extension, Cook College, Rutgers University, New Jersey. Provide direction in environmental, agricultural and resource management program development, and applied research activities of Cooperative Extension specialists (37.8 FTE faculty). Earned doctorate in agriculture, environmental or biological science, or related discipline required. Cooperative Extension and applied research background, demonstrated administrative competency in program development and leadership, fiscal planning, and budget and personnel management required. Applications accepted until 1 November 1986. Send résumé with names and addresses of three or more references to: **Anne L. Sheelen, Assistant Director of Extension, Cooperative Extension, P.O. Box 231, New Brunswick, NJ 08903. Rutgers University is an Equal Opportunity Employer.**

CHAIRMAN DEPARTMENT OF BIOCHEMISTRY

St. Jude Children's Research Hospital, a private research institute, is engaged in a major expansion of its scientific activities and facilities. We are beginning with a search for a chairman of biochemistry. The successful candidate will have an internationally recognized research program in contemporary biochemistry or molecular biology. We offer opportunities for expansion of the new chairman's personal research effort, for recruitment of new faculty in complementary research areas, and for participation in the scientific leadership of the institution. Resources will be provided commensurate with the needs of a dynamic and ambitious individual. Applicants should submit curriculum vitae under cover of a letter summarizing their research accomplishments and goals, along with the names and addresses of three references. Address applications and nominations to:

**Charles J. Sherr, M.D., Ph.D.
Chairman, Tumor Cell Biology
St. Jude Children's Research Hospital
332 North Lauderdale
Memphis, TN 38105**

CHAIRPERSON DEPARTMENT OF ANATOMICAL SCIENCES MEHARRY MEDICAL COLLEGE

Applications and nominations are invited for the position of **CHAIRPERSON OF THE DEPARTMENT OF ANATOMICAL SCIENCES.** Ph.D., M.D. or equivalent degree is required. Candidates must have a distinguished record of teaching and research achievement and have demonstrated evidence of leadership ability. The position requires a strong commitment to the continuing development of departmental research, academic programs, faculty, and resources. Applicants should send curriculum vitae, letter of application, and a list of five references to:

**James G. Townsel, Ph.D.
Professor and Chairman
Department of Physiology
Meharry Medical College
1005 D. B. Todd Boulevard
Nashville, TN 37208**

The position will be available 1 September 1986, however; applications will be accepted until the position is filled.

An Equal Opportunity/Affirmative Action Employer

DEVELOPMENTAL BIOLOGIST: The Department of Biological Sciences, University of Southern Mississippi is seeking candidates with Ph.D. degree in developmental biology (animal or plant) for a tenure-track position at the assistant or associate professor level. A research orientation directed toward molecular, genetic, or cellular approaches to the topic is preferred. Teaching responsibilities will include participation in freshman level biology courses and development of upper level courses in area of expertise (to include a course in developmental biology) for undergraduate and graduate majors. Submit curriculum vitae, three letters of recommendation, current reprints, and a statement of research interests to: **Dr. B. L. Middlebrooks, Box 5153 Southern Station, Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS 39406.** Closing date: 15 October 1986. *An Affirmative Action/Equal Opportunity Employer.*

QUEEN'S NATIONAL SCHOLARS (Faculty Appointments)

QUEEN'S UNIVERSITY AT KINGSTON invites applications from outstanding scholars for faculty appointments in the life, physical and social sciences, the humanities, business, education, engineering, law, medicine, nursing, rehabilitation therapy, and industrial relations, public administration and urban and regional planning. Preference will be given to scholars in the early or mid career stages.

These appointments are to enrich teaching and research in newly developing fields of knowledge as well as traditional disciplines. Another objective is to provide an opportunity to improve the proportion of women on faculty.

Under a special "Queen's National Scholar" program these appointments will be either bridging appointments to regular tenure track positions or special shorter term appointments. THE MAIN CRITERION OF INTEREST TO THE SELECTION COMMITTEE IS ACADEMIC EXCELLENCE REGARDLESS OF OTHER CONSIDERATIONS. In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents.

Each application should include a curriculum vitae and a brief statement of current and prospective research interests (if not included in the vitae). Candidates should arrange to have letters from three referees sent directly to the address below. Applications and letters of reference to:

The Head(s) of the department(s) of the applicant's field(s) of study or to the Secretary, Queen's National Scholar Committee, c/o Principal's Office, Queen's University, Kingston, Canada, K7L 3N6.

Applications will be received and considered at any time, but to be considered for the next round of the competition they must be received by October 15, 1986.

DIRECTOR — MOLECULAR BIOLOGY

The Pharmaceutical Products Division of Abbott Laboratories is conducting an international search for an established investigator to head a newly formed molecular biology group. The role of this group will be to initiate programs of fundamental significance in areas of prokaryotic and eukaryotic molecular biology. This expansion is backed by major corporate support and is based on the recognition that successful development of new therapeutic entities relies heavily on the highest quality fundamental research.

We are seeking individuals with a minimum of 5 years experience post-doctoral, conducting independent research in either an industrial or academic laboratory. Resources are available for the successful candidate to recruit and lead a highly trained research team into areas of molecular biology that will include new applications as well as complement ongoing drug design programs. Expertise in any area of molecular or cellular biology will be considered; however, the multidisciplinary nature of our investigative programs makes a broad background highly desirable. In addition to a proven record of scientific accomplishment, managerial skills are essential.

Abbott Laboratories is a diversified healthcare company with annual sales of \$3.5 billion. Principal offices and pharmaceutical research operations are located in an attractive suburban community near Lake Michigan, just 30 miles north of Chicago. We provide a benefits package which includes profit sharing and stock retirement plan. For consideration send a resume in confidence to: Patricia Handy/Corporate Placement, Dept. S/9-12. Abbott is an Affirmative Action Employer.



ABBOTT
ABBOTT PARK IL. 60064

"HEALTH CARE WORLDWIDE"

Faculty Positions

Department of Microbiology and Immunology
SUNY Health Science Center
at Brooklyn

The Department of Microbiology and Immunology invites applications for several junior and senior faculty positions; salary and rank open depending upon qualifications and experience. These positions represent a newly funded commitment of SUNY to further the development of a strong and innovative program in the general area of Molecular Biology. To this end, the Department of Microbiology and Immunology has recently established a self-sufficient core facility (The Morse Institute of Molecular Genetics) to provide investigators with technical and logistic support. In addition, newly renovated laboratory space, technical support, and generous start-up funds are available for each position. Successful candidates are expected to conduct a vigorous and independent research program, participate in Medical and Graduate School teaching and interact collaboratively with other investigators within the HSCAB. Preference will be given to applicants interested in the molecular aspects of eucaryotic and pro-caryotic genetics, cancer, differentiation gene expression and replication. Send Curriculum Vitae, names of three references, and a brief statement of research interest by November 30, 1986 to: William McAllister, Ph.D., Chairman, Department of Microbiology and Immunology, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box 44, Brooklyn, NY 11203.



State University of New York
HEALTH SCIENCE CENTER
AT BROOKLYN

EO/AA Employer DMC#C-0017

SENIOR SCIENTIST Mass Spectroscopist—Drug Metabolism

The LILLY RESEARCH LABORATORIES, a division of Eli Lilly and Company, is seeking candidates for a Senior Scientist position in the department of Drug Disposition.

Applicants must have a doctoral degree. Postdoctoral experience is desirable but not required. A thorough understanding and a working knowledge of mass spectrometry is essential.

The primary responsibilities for the Senior Scientist is to apply LC/MS-MS and FAB/MS-MS to investigate the metabolic fate of new drug candidates and to elucidate the mechanisms involved in the biotransformation process. Responsibilities also include overseeing the operation and scheduling of three mass spectrometers within the Department of Drug Disposition. This position represents a unique challenge to the qualified mass spectroscopist interested in conducting innovative and significant research in the field of drug metabolism.

Qualified candidates should send their curriculum vitae to:



John W. Crooks
Manager, College Relations (MS/DM)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Equal Opportunity Employer

POSITIONS OPEN

CHEMISTRY

The University of Maryland University College is seeking faculty to teach chemistry and math, including differential equations, to Malaysian students in Malaysia. College level teaching experience and U.S. citizenship required; Ph.D. and Asian experience preferred. Start October 1986 or January 1987. Twelve-month appointment, possibly renewable. Shorter appointment possible. School allowances cannot be paid. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. Richard Schreck, Director, International Programs, The University of Maryland University College, College Park, MD 20742. Affirmative Action/Equal Opportunity Employer.**

CHIEF OF LABORATORY SERVICES VA LAKESIDE MEDICAL CENTER, CHICAGO, ILLINOIS

This is a 515-bed teaching hospital which is an affiliate of Northwestern University, is located in the McGaw Medical Center, and is proximate to the Medical School. Candidates must be Board-certified in pathology, have a strong academic background, and documented administrative skills and experience in laboratory management, hospital service, and training of house staff and fellows. Commitment to investigative research and competence as a teacher are also highly desirable. The candidate must be capable of leading the continued development of the service as it pertains to scholarship, and its fully integrated relationship with the Department of Pathology at Northwestern University Medical School.

Qualified applicants are invited to send curriculum vitae and references prior to 15 November 1986 to:

Dante G. Scarpelli, M.D., Ph.D.
Chairman

Department of Pathology
Northwestern University Medical School
Chicago, IL 60611

The Veterans Administration and Northwestern University are Equal Opportunity Employers.

DIRECTOR, MOLECULAR BIOLOGY SEQUENCING AND SYNTHESIS LABORATORY

The Pennsylvania State University Biotechnology Institute is seeking a person to direct the operation of its Molecular Biology Sequencing and Synthesis Laboratory. The laboratory is presently equipped with instrumentation for the synthesis of oligonucleotides and for the automated hydrolysis, derivatization, gas-phase based sequencing, and on-line analysis of peptides/proteins. Instrumentation for the automated extraction of nucleic acids, for the automated sequencing of DNA, and for peptide synthesis will be added shortly. Applicants should hold a Ph.D. or have extensive experience operating sequencing and/or synthesis instrumentation. The successful applicant will be expected to instruct students in the theory and operation of the instrumentation and to operate, maintain, and improve it. The position carries the academic rank of lecturer in molecular biology. Send curriculum vitae and three letters of recommendation to: **Dr. S. Edward Stevens, Jr., Associate Director, Biotechnology Institute, 101 South Frear Building, The Pennsylvania State University, University Park, PA 16802.** Closing date for receipt of applications is 3 November 1986. *Affirmative Action/Equal Opportunity Employer.*

EXPERIMENTAL PLANT ECOLOGIST

Seeking applicants for a tenure-track position at the assistant professor level to begin fall 1987. Candidates must have demonstrated independent research productivity and must be capable of attracting research support. Postdoctoral research experience is preferred. Research interest in interspecific interactions, such as plant-plant, mutualisms, or herbivory, is preferred. Qualifications require a Ph.D., the ability and willingness to teach graduate community ecology, speciality area, and in basic undergraduate teaching program. Send curriculum vitae and names of three references to: **Dr. Steven N. Handel, Chair, Plant Ecology Search, Department of Biological Sciences, Rutgers University, P.O. Box 1059 Piscataway, NJ 08854,** before 1 November 1986. *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DIRECTOR OF PUBLIC INFORMATION

The Cancer Research Institute, a not-for-profit organization founded in 1953 to sponsor research in cancer immunology, is seeking an experienced research scientist with new career goals to author reports, articles, a newsletter, and other materials on general and cancer immunology.

This is a new position requiring an individual who is well grounded in the research and clinical implications of emerging immunological approaches to cancer treatment and who is able to communicate these issues effectively in verbal and written form to both lay and professional audiences. Respond in confidence to: **James E. Siegel, Executive Director, Cancer Research Institute, 133 East 58 Street, New York, NY 10022.**

ELECTROPHYSIOLOGIST. Ph.D. with 2 years of postdoctoral experience with CNS slice or culture preparations for immediate opening in Department of Neurology, Oregon Health Sciences University, at research associate/instructor level. Work to consist of extra- and intracellular recording from CNS explant cultures in an established laboratory at the affiliated Portland VA Medical Center. Salary range from \$27,000 to \$33,500, depending upon experience and qualifications. Send curriculum vitae and names of 3 references to: **Fredrick J. Seil, M.D., Professor of Neurology, Neurology Research (151N), VA Medical Center, Portland, OR 97201. An Affirmative Action/Equal Opportunity Employer.**

EXTENSION SPECIALIST IN BLUEBERRIES AND CRANBERRIES, Cooperative Extension, Cook College, Rutgers University, New Jersey. Develop recommendations and guidelines for the management of economically important insects affecting commercial blueberry and cranberry production. Ph.D. in entomology, preferably with experience in horticulture entomology required. Knowledge of blueberry and cranberry culture and its insect problems preferred. Applications accepted until 26 September 1986. Send résumé with names and addresses of three or more references to:

Anne L. Sheelen
Assistant Director of Extension
Cooperative Extension Service
P.O. Box 231
New Brunswick, NJ 08903

Rutgers University is an Equal Opportunity Employer.

NEUROSCIENCE UNIVERSITY OF OREGON DEPARTMENT OF BIOLOGY

The Department of Biology seeks applicants for two tenure-track **FACULTY POSITIONS.** The appointments will be made in the Institute of Neuroscience, an interdepartmental, multidisciplinary scientific group, whose main strengths now lie in the area of neuroethology, visual systems, circadian rhythms, neuromuscular control mechanisms, and cellular and developmental neuroscience. The level of the appointments is open. Please send curriculum vitae with a statement of research interest and names of three referees before 20 November 1986 to: **Neuroscience Search Committee, Department of Biology, University of Oregon, Eugene, OR 97403. The University of Oregon is an Affirmative Action/Equal Opportunity Employer.**

The Department of Chemistry at Purdue University solicits applications for tenure-track faculty positions in **ORGANIC CHEMISTRY AND PHYSICAL CHEMISTRY** to begin August 1987. Applicants will be considered at all ranks, but strong preference will be given to the rank of **assistant professor.** Minimum requirements at the assistant professor level include a Ph.D. degree and exceptional promise in research and teaching at the undergraduate and graduate levels. Applicants for higher ranks must have demonstrated distinguished research and teaching accomplishments. Areas of expertise are open. Curriculum vitae, including undergraduate and graduate transcripts for applicants at the assistant professor level, a summary of planned research, and three letters of recommendation should be sent by 15 November 1986 to: **Professor Harry L. Pardue, Head, Department of Chemistry, Purdue University, West Lafayette, IN 47907.** Applicants should state which position is of interest to them. *Purdue is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN CELL/ DEVELOPMENTAL BIOLOGY

Applications are invited for a tenure-track position in the Department of Biological Sciences at Carnegie-Mellon University. Applicants must be strongly motivated toward carrying out research in cell and/or developmental biology. Candidates who are just completing their postdoctoral research training will be considered for a position of starting assistant professor; exceptionally well-qualified individuals may be considered for appointment at a higher level. To apply, send curriculum vitae and a concise description of research interests (no more than three pages) and, in addition, have three letters of recommendation sent to:

Dr. Elizabeth W. Jones
Search Committee

Department of Biological Sciences
Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, PA 15213

Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.

AMHERST COLLEGE CHEMISTRY. Amherst College has available a regular **FACULTY POSITION**, to take effect 1 July 1987, for a Ph.D. with a strong background and interest in experimental physical chemistry or chemical physics. The appointment will preferably be at the assistant professor (tenure-track) level, but more senior applicants may be considered. This position represents an excellent professional opportunity for a person committed to both research and teaching at an institution dedicated to undergraduate education. Teaching responsibilities customarily include instruction in departmental courses at both elementary and advanced levels. Involvement in extra-departmental interdisciplinary courses and programs is encouraged. The successful candidate will be expected to develop an active research program in which undergraduates can participate. Applicants should submit a résumé, names of three references, and a brief description of both teaching and research ideas to: **Dr. J. N. Kushick, Department of Chemistry, Amherst College, Amherst, MA 01002,** by 1 November 1986. *Amherst College is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN BIOCHEMISTRY BAYLOR COLLEGE OF MEDICINE

The Department of Biochemistry, Baylor College of Medicine, is seeking highly qualified applicants for a full-time, (12-month) appointment in the department at the level of **assistant (tenure-track) or associate professor.** Although preference will be given to candidates with research interests in the areas of protein structure/function or membrane biochemistry, including protein targeting, outstanding individuals in other areas will be considered. The successful candidate will be expected to develop a strong research program capable of attracting extramural funding. Principal teaching duties will involve participation in medical and graduate biochemistry courses and serving as research advisor for doctoral students. Applicants must have a Ph.D. degree (or equivalent) and postdoctoral experience. Send curriculum vitae, copies of relevant publications, a brief outline of accomplished and proposed research, and the names and addresses of three references to: **Chairman, Search Committee, Department of Biochemistry, Baylor College of Medicine, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITION IN BIOCHEMISTRY. Applications are invited for a tenure-track position in an expanding life science program. The successful candidate must have a doctorate degree in biochemistry or related field and a commitment to development of a strong research program and to the teaching of health science and graduate students. Excellent opportunities for development of interdisciplinary projects involving the Schools of Basic Life Sciences, Medicine, Dentistry, Pharmacy, and others. Rank and salary commensurate with qualifications and experience. Screening of applications will begin on 1 October 1986. Applicants should send résumé and names of three references to: **Dr. Ronald MacQuarrie, Division of Molecular Biology and Biophysics, School of Basic Life Sciences, University of Missouri-Kansas City, Kansas City, MO 64110. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.**

SEARCH REOPENED DEAN FOR COLLEGE OF BIOLOGICAL SCIENCES

Applications and nominations are invited for the position of the dean of the College of Biological Sciences (CBS) at the University of Minnesota. The college includes the departments of Biochemistry, Botany, Ecology and Behavioral Biology, Genetics and Cell Biology, the Gray Freshwater Biological Institute, the Institute for Advanced Studies in Bioprocess Technology, the Bell Museum of Natural History, the Plant Molecular Genetics Institute, and a number of affiliated departments in other colleges. CBS has the major responsibility for undergraduate education in biology and is a focal point for research in basic biology at the University of Minnesota among a large number of biologists located in Health Sciences, Agriculture, Veterinary Medicine, and Bioengineering.

The University of Minnesota considers that biology will be the major scientific activity of the coming century. We are seeking a person of demonstrated scientific and intellectual excellence who will lead the college to a position of preeminence in research, scholarship, and teaching. The candidate is expected to possess a Ph.D. or other appropriate doctoral degree and shall be appointed to a tenured professorship in one of the collegiate departments.

Applications will begin to be reviewed by the search committee on October 15, and we encourage all applications to be postmarked by that date. If a suitable pool of applicants is not identified, applications will continue to be received until such a suitable pool is obtained.

Send nominations and applications to:

Dr. Martin Dworkin
Department of Microbiology
University of Minnesota
Minneapolis, Minnesota 55455
Telephone 612-373-8048 or 612-624-5634

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



Scientist

ONCOGEN, a division of Bristol-Myers, performs research and development for cancer diagnosis and therapy. We currently have a career opportunity for an individual in the area of antibody based tumor therapy. You will study distribution of intravenously injected antibodies in nude mice transplanted with human tumors.

Qualified candidates must have at least a Master's degree (Ph.D. preferred) in the field of experimental pathology or nuclear medicine. Experience should preferably include development of assays to support clinical research in "imaging" of tumors with radiolabelled MABs, and development of methods for purification and fragmentation of murine monoclonal antibodies. Your record should demonstrate accuracy, creativity and dependability in order to contribute to our fast-paced, stimulating state-of-the-art company.

ONCOGEN offers a competitive salary and benefits package in an exciting research environment. Please send resume, including publications, salary history and references to: **Personnel Dept., ONCOGEN, 3005 First Avenue, Seattle, Washington 98121.** Equal Opportunity Employer/AAP.

RESEARCH SCIENTIST

Anticancer Drug Evaluation

Rapidly expanding **Adria Laboratories** has a position of high visibility and responsibility for an experienced scientist who excels in the laboratory aspects of screening and evaluating anticancer drugs using in vitro and in vivo methods.

Qualified candidates will have a PhD in Biochemistry or Immunology, at least 2 years' postdoctoral experience in tumor biology, and a strong orientation towards biotechnology.

Adria offers superb compensation and benefits, a diverse and attractive living environment in Columbus, Ohio, and a chance to participate in the enriched professional atmosphere associated with our rapid growth. Forward resume and salary requirements to: **Adria Laboratories, Employment, Box JWK, P.O. Box 16529, Columbus, Ohio 43216.** An Equal Opportunity Employer M/F/H/V.

Adria
ADRIA LABORATORIES

STATE UNIVERSITY OF NEW YORK AT BUFFALO BIOLOGICAL SCIENCES—FACULTY OPENING

ASSISTANT PROFESSORSHIP: Our goal is to hire a person whose research program is in the forefront of his/her field, who can interact with other members of our faculty. Serious candidates will be expected to be utilizing modern genetic and molecular approaches to the study of one of the following areas: (a) the *immune system* at the cellular level, (b) the development of an organism which provides a model system for studies in *development*, or (c) regulation in an organism to provide a model for studies of regulation at the level of *gene transcription*.

Successful candidates will be expected to have completed at least two to three years of post-doctoral experience, demonstrate experience in a productive research program, be able to describe in detail plans for future research activities, and show promise for establishing a fundable independent research program.

Candidates will also be expected to demonstrate above average teaching ability for both undergraduate and graduate teaching. *Salary will be nationally competitive; excellent laboratory space and equipment available.*

To apply, candidates must submit a curriculum vitae, including a statement of research background and teaching experience, and at least *three letters of reference*, to **Dr. Darrell Doyle, Chairman, Department of Biological Sciences, 109 Cooke Hall, State University of New York at Buffalo, Buffalo, NY 14260.** Application deadline is December 15, 1986.

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

RESEARCH ASSOCIATE

An industry leader, **Amgen** develops products for human therapeutics, human diagnostics and animal health care. We have an immediate opening for an experienced **Research Associate** who will interact with other Scientists to characterize natural and recombinant proteins.

The successful candidate will have a B.S. or M.S. degree in biochemistry or immunology and several years of related experience.

Responsibilities for this position will include protein characterization, immunoassay development, antibody and protein purification, western blotting and mammalian cell culture including production and maintenance of hybridoma cell lines.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating highly paced environment, along with a competitive compensation and benefits package.

Qualified candidates should submit a resume in confidence to: **Recruitment, Dept. 22B, AMGEN, 1900 Oak Terrace Lane, Thousand Oaks, CA 91320.**

AMGen

An Equal Opportunity Employer

POSITIONS OPEN

FACULTY POSITIONS DEPARTMENT OF BIOLOGY BOSTON UNIVERSITY

As part of its \$100-million development in science and engineering, Boston University seeks applicants for new and replacement faculty positions in the Department of Biology. Although it is anticipated that these tenure-track positions will be filled at the assistant professor level, exceptional candidates at more senior levels are encouraged to apply. Applicants should have postdoctoral training, demonstrate excellent potential to develop a strong, externally funded research program, and be qualified to teach at both the undergraduate and graduate levels in their area of specialization. Competitive start-up funds are available. Positions to be filled for September 1987 include the following:

COMPARATIVE PHYSIOLOGY. Candidates whose research interests are in one or more of the following areas are preferred: comparative physiology with emphasis on the biophysics of ion transport, chronobiology, neuropeptide physiology, or behavioral endocrinology. The successful applicant will be expected to complement the research strengths of existing faculty in neuroendocrinology, reproductive endocrinology of lower vertebrates, behavioral endocrinology, and neurobiology.

PLANT PHYSIOLOGICAL ECOLOGY. Candidates whose research interests are in the general area of physiological adaptations to environmental stress are preferred. The successful applicant will be expected to complement the research strengths of existing faculty in biochemical ecology, population biology, behavioral ecology, physiological ecology, evolutionary ecology, and microbial ecology.

MOLECULAR BIOLOGY. Candidates whose research interests lie in one or more of the following areas are preferred: molecular virology (eukaryotic); structure, function, and regulation of oncogenes; regulation of cell growth; and eukaryotic molecular genetics. The successful applicant will be expected to complement the research strengths of existing faculty in mechanisms of intercellular communication, membrane biology, nucleic acid biochemistry, gene regulation, and developmental biology at the cellular level.

Submit curriculum vitae, a summary of research interests, recent reprints, and the names of at least three references to: **Chair, Biology Search Committee (specify position), Department of Biology, Boston University, Boston, MA 02215.** Deadline for completed applications is 1 December 1986.

Boston University's policies provide for Equal Opportunity and Affirmative Action in Employment and admission to all programs of the university.

Board-certified/Board-eligible M.D. MEDICAL GENETICIST for FACULTY POSITION with the Department of Pediatrics, University of Connecticut School of Medicine. Experience in medical genetics with working knowledge in restriction fragments lengths polymorphism analysis. Responsibilities include academic, clinical, and research duties, as well as creating a DNA diagnostics laboratory and developing university-wide linkages for establishment of major educational and research programs in human genetics. Send curriculum vitae to: **Suzanne B. Cassidy, M.D., Director, Division of Medical Genetics, Department of Pediatrics, UNIVERSITY OF CONNECTICUT HEALTH CENTER, 263 Farmington Avenue, Farmington, CT 06032.** An Affirmative Action/Equal Opportunity Employer, M/W/H.

INSTRUCTOR IN MEDICINE (Research). Division of Endocrinology and Metabolism. Duties: Research work on factors influencing bone metabolism and osteoporosis. Use of tissue culture, in vivo methodology, biochemical assays, and separation chemistry; write up and present results at scientific meetings and publications. Requirements: M.D. or Ph.D. in cell biology, physiology, or biochemistry, at least 2 years of research experience in bone metabolism. Salary: \$30,000 per year. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order 2559771. An Affirmative Action/Equal Opportunity Employer, M/W/H.

POSITIONS OPEN

FACULTY POSITIONS IN BIOCHEMISTRY

Applications are solicited for three tenure-track positions at the level of assistant professor and one tenure-track associate professorship to be filled during 1986. Although special consideration will be accorded to those with research expertise in mammalian gene expression and regulation, molecular biology, membrane or receptor biochemistry, applicants in all areas will be evaluated. In regard to the assistant professorships, the candidates should have a proven record of productivity and the ability to develop an independent funded research program. The candidates for the Associate Professorship should, in addition, have extramural funding. All applicants should possess a Ph.D. in biochemistry (or related discipline) and should have several years of postdoctoral experience. The successful candidates will be expected to contribute in the departmental teaching programs. Salary will be commensurate with experience. Applicants should submit curriculum vitae, a statement of research interests, three letters of recommendation to:

Dr. Edward Bresnick
Department of Biochemistry
University of Nebraska Medical Center
42nd and Dewey Avenue, Omaha, NE 68105

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

Two tenure-track **FACULTY POSITIONS AT THE ASSISTANT PROFESSOR LEVEL** are available for the 1987-1988 academic year. Exceptional candidates at higher ranks may be considered.

- 1) **MODERN SYSTEMATIST USING BOTH FIELDWORK AND THEORY.**
- 2) **CELLULAR OR DEVELOPMENTAL BIOLOGIST. PREFERENCE WILL BE GIVEN TO A PERSON WHO WILL ALSO SUPERVISE THE DEPARTMENTAL SEM/TEM FACILITY.**

Successful candidates will be expected to have demonstrated commitment to quality teaching and a vigorous, independent research program. Please submit curriculum vitae (including biographic data), short statement of research objectives, names of at least five referees, and selected reprints to: **The Chairman, Department of Zoology, University of Texas at Austin, Austin, TX 78712,** before 1 November 1986.

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer

GEOPHYSICS—ASSISTANT PROFESSOR—Department of Geology. Applications are invited for a tenure-track assistant professorship to begin September 1987. The applicant should have a strong geological background and have both research and teaching interests related to applications of seismic methods, particularly in stratigraphic studies. Graduate and undergraduate teaching, including general geology classes and courses for a B.S. geophysics program, are regular parts of the position's responsibilities. A Ph.D. is required and candidates with post-degree experience are particularly favored. The University of Delaware is a medium-sized state-supported institution with strong emphasis on research. There are currently nine members on the geology faculty. Please send a résumé and the names, addresses, and telephone numbers of three references by 15 December 1986 to: **Dr. John F. Wahmiller, Chair, Search Committee, Department of Geology, UNIVERSITY OF DELAWARE, Newark, DE 19716.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

HEAD, DIVISION OF GROSS ANATOMY DEPARTMENT OF ANATOMY UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

We are seeking applicants for a position at the professor or associate professor level to direct the medical and graduate course in human gross anatomy. Candidates must have appropriate teaching experience and a distinguished record of scholarship and research achievement in neural, muscle, reproductive, or developmental biology. Applicants should send curriculum vitae and names and addresses of references to: **Lloyd Guth, M.D., Chairman, Department of Anatomy, SM, UMAB, 655 West Baltimore Street, Baltimore, MD 21201.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

The Department of Health Science, The Wichita State University, invites applications for a **FACULTY POSITION IN HUMAN PHYSIOLOGY.** Teaching activity is comprehensive in areas of clinical physiology and pathophysiology for undergraduate and graduate students in allied health and nursing. Candidates must have an earned doctorate in an appropriate field and show evidence of research competence in human physiology (exercise physiology is particularly desirable). Teaching credentials required and experience in teaching human physiology at either the graduate or undergraduate level desired. This is a 12-month, full-time teaching and research faculty position, eligible for tenure review. Preferred starting date: January 1987. Letters of application or nomination, curriculum vitae, and names and addresses of four persons able to provide current references should be sent to: **Dr. Stephen Gladhart, Search Committee Chairperson, College of Health Professions, Health Science Department, The Wichita State University, Wichita, KS 67208.** Deadline for receipt of application: 20 October 1986. *Wichita State University is an Affirmative Action/Equal Opportunity Employer.*

HEAD, DEPARTMENT OF GEOLOGY AND GEOPHYSICS, UNIVERSITY OF WYOMING.

The University of Wyoming, Department of Geology and Geophysics seeks applicants for the tenure-track position of department head, starting fall semester 1987. Duties emphasize directing the department during an exciting period of development. Appointment will be at the full professor level and salary is open, commensurate with experience and qualifications. The applicant may be from any subdiscipline of the geosciences and should have developed an internationally recognized research program, preferably using quantitative approaches. A record of successful interaction with both industry and funding agencies is expected. The Department of Geology and Geophysics has 24 faculty, extensive modern instrumentation, and is research oriented. Integration of field and laboratory studies is emphasized.

Applicants should provide a résumé, names of three references, and a letter of application including a statement of current research interests and courses which the applicant feels qualified to teach. Applications must be postmarked no later than 31 October 1986, and sent to: **Dr. James E. McClurg, Acting Department Head, Department of Geology and Geophysics, P.O. Box 3006, University of Wyoming, Laramie, WY 82071.** *The University of Wyoming is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOLOGIST: Tenure-track position at the assistant professor level for January 1987. Applicants should have a Ph.D. with postdoctoral research experience desired in basic and/or clinical immunology and demonstrated interests in hybridoma technology or reproductive biology. Integrated research collaboration with faculty in an In-Vitro Fertilization Program and Andrology Laboratory are available. Teaching responsibilities include introductory courses in immunology and pathophysiology, with optional development of courses in candidate's area of specialization. Send curriculum vitae, summaries of current and proposed research, and names of three references by 1 October 1986 to: **Dr. Harold G. Marshall, Department of Biological Sciences, Old Dominion University, Norfolk, VA 23508.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

Stanford University School of Medicine invites nominations of and applications from candidates for appointment to the full-time faculty as **PROFESSOR AND CHAIRMAN** of the Department of Developmental Biology, a new department that will occupy a part of the new Center for Molecular and Genetic Medicine, whose construction is scheduled for completion in the fall of 1988. Interested candidates should send curriculum vitae and names of referees who can be contacted to: **David S. Hogness, Chairman, Search Committee for Developmental Biology, c/o the Dean's Office, Stanford University Medical Center, Room M-119, Stanford, CA 94305.**

Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.

**AUSTRALIA
CSIRO
CHIEF OF DIVISION
DIVISION OF WATER
RESOURCES RESEARCH**

CSIRO, Australia's largest and most comprehensive research organization is seeking a Chief to lead its Division of Water Resources Research. This Division, recently formed by the reorganization of water and related research activities in CSIRO, has staff located in Perth, WA (70), Canberra, ACT (90) and Adelaide, SA (5).

The Division's major mission will be to develop new or improved practices for the definition, use and management of Australia's water resources including the maintenance of the quantity and quality of urban, rural and industrial water supplies. The major applications of the Division's research will lie with agencies and users with water, and water related, responsibilities and needs.

Applicants should be distinguished scientists or engineers with an international reputation in a broad aspect of water resources research and its application to the quantitative or economic aspects of water and related land or catchment management.

As the Division's research will encompass major national and regional problems, the successful applicant will need the ability to co-ordinate research teams across several disciplines and to manage research projects funded by user agencies at regional, state and federal level.

In addition to providing leadership and scientific direction to the research of the Division, the Chief will be specifically required to foster collaboration between the Division and Australian water industry, and to ensure the practical application of relevant results of the Division's research.

The salary for the position will be not less than A\$63,684 per annum, and this could rise to a maximum of A\$69,474 per annum for an exceptional candidate. The appointment also attracts an expense of office allowance of A\$1,355 per annum.

Appointment to CSIRO is for an indefinite period and carries Australian Government superannuation privileges, subject to normal conditions. The position of Chief of Division is offered for a negotiable term of five to seven years, with subsequent options for a further term, if mutually desired, or for a senior position in the Organization. The Chairman of the Search Committee, Dr A F Reid, would be pleased to provide further information or discuss the position with potential applicants. He would also be pleased to receive nominations for the appointment from people with standing in the field. He may be contacted in Sydney by telephone (02) 887 8670, telex AA25817.

Applications stating relevant personal and professional details, and names of at least three professional referees, and quoting reference number A3071 should reach:

Dr A F Reid
Director
CSIRO Institute of Energy and Earth Resources
PO Box 225
DICKSON ACT 2602
AUSTRALIA

by 30 November 1986.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

**MOLECULAR BIOLOGY
AND CNS RESEARCH**

The Upjohn Company is seeking two research scientists to apply molecular and cellular techniques to the study of the nervous system.

One position is in the CNS research group, and will involve use of molecular genetic and cell biological techniques in the development and evaluation of novel agents which inhibit neuronal degeneration or promote regeneration. The program is intended to develop drugs for the treatment of acute and chronic degenerative neurological disorders.

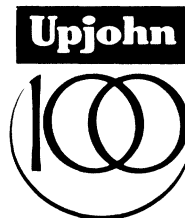
The other position is in molecular biology research. This group is part of Upjohn's biotechnology program, and is responsible for development of molecular genetics research programs and interaction with therapeutic discovery programs throughout The Upjohn Company. The position involves use of gene cloning techniques such as cDNA and genomic library construction to establish a research program in a therapeutically important system. Particular attention will be given to applicants with a background and interest in applying molecular biology to problems in neurobiology.

Qualifications for both of these positions include a Ph.D. degree in a relevant field, along with post-doctoral experience. Established investigators are encouraged to apply for these positions.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate.

For confidential consideration, please call toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616-323-6767) to request an employment application be sent to you. Please refer to Ad Number 18005-F when calling.



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POSITIONS OPEN

IMMUNOLOGIST

The Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, invites applications for a tenure-track position at the level of assistant professor. Qualified individuals should have a Ph.D. or M.D. and at least 2 years of postdoctoral research experience in immunology. Individuals with research interests in tumor immunology, macrophage activation, or the regulation of IgE synthesis are particularly encouraged to apply. The successful applicant will be expected to establish a strong independent research program and participate in the teaching of graduate and medical students. Candidates are requested to submit curriculum vitae and the names of three references to: **Dr. Steven B. Mizel, Chairman, Department of Microbiology and Immunology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, NC 27103.** *Wake Forest University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Surgery, Stanford University School of Medicine is searching for a Ph.D. IMMUNOLOGIST to head a newly created immune monitoring laboratory as part of the program in renal transplantation. The individual will have day to day administrative responsibility for this clinical hospital laboratory. The position will be at the level of associate professor (research). This position has the full privileges of the Academic Council at Stanford. Support for the position is dependent on the function of the laboratory and on income from grants and contracts.

The candidate should have a special interest and experience in problems related to the clinical care of patients with renal transplantation and should have demonstrated accomplishment and promise in areas of immunology which relate closely to the problems of organ transplantation.

Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.

All of those interested should send a copy of their curriculum vitae and a letter of interest to: **The Chairman of the Search Committee, Dr. John A. Collins, M.D., Department of Surgery, Stanford University School of Medicine, Stanford, CA 94305.**

NEPHROLOGIST (Board-certified or -eligible). Full-time, faculty position at the University of Wisconsin Medical School, Department of Medicine, Section of Nephrology. Nominations and applications are invited for the position of head of the Nephrology Section. Additional responsibilities involve those of attending physician, participation in nephrology clinics and teaching programs, and active participation in nephrology research activities. Send inquiries or curriculum vitae to: **William W. Busse, M.D., Chairman, Nephrology Search Committee, H6/360, Clinical Science Center, 600 Highland Avenue, Madison, WI 53792.** Telephone: 608-263-6174. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

NEUROSCIENTIST

The Neuroscience Program at Oberlin College invites applications for a full-time, tenure-track position beginning July 1987. The initial appointment is for 4 years and carries the rank of assistant professor or higher. The program seeks a neuroscientist with general interests in either cellular, systems, or behavioral neurophysiology. Candidates with backgrounds in fields such as vertebrate or invertebrate neurophysiology, neuroethology, or neuroendocrinology are especially encouraged to apply, although all applicants will be given consideration. The qualifications include the Ph.D. in either neuroscience, biology or biopsychology, and demonstrated interest and potential excellence in teaching and research. Teaching responsibilities include courses in introductory neuroscience (neurophysiology), physiology, and an upper level course consistent with the candidate's interests and training. Interested applicants should send letters of application including curriculum vitae, academic transcripts, reprints, and at least three letters of recommendation to: **Dennison Smith, Chair, Neuroscience Program, Oberlin College, Oberlin, OH 44074,** by 15 November 1986. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Center for Environmental Health, Centers for Disease Control (CDC), Atlanta, Georgia, is seeking to recruit a **MEDICAL EPIDEMIOLOGIST** to direct a study of reproductive outcomes as they may relate to specific environmental exposures.

Applicants must have a degree in medicine (M.D. or equivalent). In addition to the M.D., a doctoral degree in epidemiology is preferred. Also, they must have specialized training in genetic epidemiology and pediatric medicine. Other requirements include a minimum of 2 years of experience in design and analysis of genetic epidemiologic studies of birth defects as evidenced by a significant number of publications in peer-review journals.

Salary range: \$37,599 to \$41,358. For technical information related to this announcement, contact: **Dr. Frank DeStefano; telephone: 404-454-4472.** Send résumé to: **Mrs. Louise Griggs, PMO, CDC, 1600 Clifton Road, NE, Atlanta, GA 30333.** Applications must be submitted within 3 weeks of this announcement.

CDC is an Equal Opportunity Employer

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

MICROBIOLOGIST—MOLECULAR VIROLOGY OR MOLECULAR PATHOGENESIS. Several tenure-track, or tenured faculty positions at all academic levels are now available for individuals (Ph.D. or M.D.) with significant experience and strong promise in research involving either molecular virology or molecular pathogenesis of infectious disease, preferably with a molecular genetics emphasis. Resources are available both in the department and in the recently established Howard Hughes Institute for Molecular Genetics and Medicine (with joint appointments in the department). Send curriculum vitae, a brief statement of research interests, and three letters of reference to:

**Dr. Barry Eisenstein, Chairman
Department of Microbiology and Immunology
The University of Michigan Medical School
6643 Medical Science Building II
Ann Arbor, MI 48109**

Affirmative Action/Equal Opportunity Employer.

NMR—RESEARCH ASSOCIATE (Postdoctoral Fellow) position available immediately to participate in recording proton and phosphorus spectra of live human patients and live animals in 1.5T/1 meter bore and 2T/30 cm bore instruments, respectively. Candidates should have strong background in NMR. Send curriculum vitae and three reference letters to: **Dr. Michael Barany, Department of Biological Chemistry, College of Medicine, University of Illinois at Chicago, 1853 West Polk Street, Chicago, IL 60612.** *An Equal Opportunity/Affirmative Action Employer.*

PHARMACOLOGY: An assistant or associate faculty position is available in the Department of Pharmacology at Ponce School of Medicine. Candidates must have a Ph.D. in pharmacology, a strong commitment to teaching medical students, and the potential to establish an independent research program. Candidates with research interests in neuropharmacology, cardiovascular pharmacology, or toxicology are encouraged to apply. However, candidates will be considered in other areas. Interested individuals should forward curriculum vitae, names of three references, and a brief statement of research plans to: **Dr. Arthur L. Hupka, Professor and Chairman, Department of Pharmacology, Ponce, School of Medicine, P.O. Box 7004, Ponce, Puerto Rico 00732.** *Equal Opportunity Employer.*

PLANT MOLECULAR BIOLOGY

The Department of Botany, The University of Texas at Austin, is seeking applicants for a full-time, faculty position to direct research, develop a graduate program, and teach in the area of plant molecular biology. Rank and salary are open, based on qualifications. Applicants should possess demonstrated capabilities for research in some molecular aspect of plant biology involving the use of recombinant DNA technology. Send curriculum vitae, statement of future research goals, and names of three references by 31 October 1986 to: **Dr. Guy Thompson, Chairman, Search Committee, Department of Botany, The University of Texas at Austin, Austin, TX 78713.**

POSITIONS OPEN

OCCUPATIONAL MEDICINE: The Center for Environmental and Occupational Health of the University of Kansas Medical Center (KUMC) is seeking an associate director for occupational medicine. The candidate should be Board-certified in occupational medicine and will participate in establishing teaching, patient care, and research programs in our new center. Salary and departmental appointment will depend on the training and experience of the candidate. Applications are desired before 1 October, but will be accepted until the position is filled. Applicants should submit their curriculum vitae, bibliography, and references to: **John Doull, M.D., Ph.D., Director, KUMC-EOHC, University of Kansas Medical Center, Kansas City, KS 66103.** *KUMC is an Affirmative Action/Equal Opportunity Employer.*

TWO POSTDOCTORAL POSITIONS available in the Department of Neurology and the Sanders-Brown Aging Center's NIA-funded Alzheimer Disease Research Center.

CLINICAL/RESEARCH ASSOCIATE position available for a BC/BE neurologist. Position combines training in the clinical evaluation of disturbances in cognitive function and memory with research experience. Clinical experiences include a Memory Disorders Clinic, a state-wide network of Outreach Clinics and general training in behavioral neurology. Clinical research opportunities in dementia are abundant. The applicant may also be involved with biochemical and morphological research in Alzheimer's disease. Successful applicant eligible for appointment as instructor in the Department of Neurology. Kentucky license eligible applicants only.

POSTDOCTORAL RESEARCH ASSOCIATE. Research is centered on assessment, characterization, and purification of neurotrophic factors from human brain and selected animal models. These basic research studies are directed toward an understanding of human degenerative diseases associated with neuronal death and potential for ameliorative therapy. The individual should have skills in protein purification, molecular biology, and cell culture.

Send curriculum vitae, letter of interest, and three letters of recommendation to: **Steven T. DeKosky, M.D. and William R. Markesbery, M.D., Department of Neurology, University of Kentucky, Lexington, KY 40536.** *An Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGIST. The Monell Chemical Senses Center, a non-profit basic research institute, has a position available immediately for studies of cephalic phase digestive reflexes to taste and smell. Ph.D. or equivalent in physiology or a related discipline required. Rank dependent on qualifications and previous experience in the area. Send curriculum vitae, statement of research interests, and names/addresses of three references to: **Director, Monell Center, 3500 Market Street, Philadelphia, PA 19104.** *Equal Opportunity Employer.*

POSTDOCTORAL OR RESEARCH ASSOCIATE position available immediately to study the role of antigen presentation by corneal endothelium in the immunology of corneal allograft rejection. Experience in cellular immunology and tissue culture of nonlymphoid cells preferred. Send curriculum vitae and names of three references before 2 October 1986 to: **Dr. J. J. Donnelly, Department of Ophthalmology, School of Medicine, University of Pennsylvania, Scheie Eye Institute, 51 North 39 Street, Philadelphia, PA 19104.**

MOLECULAR BIOLOGIST/MICROBIOLOGIST. Associate/assistant professor; tenured or tenure-track position with 90 percent research and 10 percent teaching. Candidates must have a strong research record in recombinant DNA technology, including gene cloning and expression. Must be able to apply molecular approach to livestock disease research with emphasis on infectious diseases and immunology of enteric and respiratory systems. Will present graduate lectures or courses and advise graduate students. Department has excellent research and animal isolation facilities. Ph.D. and appropriate postdoctoral experience required. Apply with current curriculum vitae, three letters of reference, and a summary of research interests by 1 November to: **John A. Schmitz, Head, Department of Veterinary Science, University of Nebraska-Lincoln, Lincoln, NE 68583-0905.** Telephone: 402-472-2952. *Affirmative Action/Equal Opportunity Employer.*

SENIOR RESEARCH MICROBIOLOGIST

Bio-Technical Resources, Inc., a privately held research and development firm founded in 1962, has an excellent career opportunity available for a microbial physiologist.

Successful candidates must possess an M.S. or Ph.D. in Microbiology. Candidates should have a high degree of flexibility, creativity, and motivation. Good oral and written communication skills are essential. Two to three years of industrial experience is preferred.

Initial assignments will be to interact with current staff to improve existing strain development and enzymology programs involving the elaboration and optimization of a wide variety of microbial products from bacteria, yeast, and microalgae.

Bio-Technical Resources is located 80 miles north of Milwaukee, Wisconsin on the shore of Lake Michigan in Manitowoc. The community offers outstanding recreational opportunities and a quality educational system. We offer a challenging work environment, competitive salary, and a comprehensive benefit program.

Send complete resume detailing educational background and experience to:

Mr. James A. Doncheck, P.E.
Executive Vice President



**BIO-TECHNICAL
RESOURCES, INC.**

1035 South Seventh Street
Manitowoc, Wisconsin 54220

The Max-Planck-Gesellschaft zur Förderung
der Wissenschaften e.V. at the

Department of Neurochemistry
Max-Planck-Institute for Psychiatry
at Martinsried, Munich

offers the opportunity to set up an

INDEPENDENT RESEARCH GROUP

Applicants should have accomplished internationally recognized research in neurobiology or related fields, especially in molecular genetics, membrane-receptor biochemistry, or neuroendocrinology.

The duration of the contract will be 5 years, the salary being within the German university scale C 3 (DM 67.000,-/75.000,-p.a.).

The Institute guarantees the salaries for one postdoctoral scientist, one technician, and a fellowship for one graduate student. Appropriate space and support for running costs and equipment will be provided. It is possible to extend this basic research potential by grant applications.

Applications should contain a tabular *curriculum vitae*, a list of publications, and a short description of scientific work both achieved and intended, and should be submitted to

H. Thoenen, Head of the Department of
Neurochemistry,
D-8033 Martinsried, FRG,

not later than October 31, 1986

Research Scientists

A Responsive Research Environment

Pioneer new discoveries in protein purification and biotechnology processes.

Schering-Plough offers a progressive research environment that is responsive to your ideas. You'll work within a community of bold thinkers, backed by the vast research resources of a \$1.9 billion world-wide pharmaceutical pacesetter. Answer the challenge of some of today's most critical quests in medical research.

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PROTEIN CHEMIST—As a principal contributor to our Bioisolation Process Development Laboratory, you'll interact with leading scientists in developing new protein purification techniques. A Ph.D. in Biochemistry is required with several years in protein purification/isolation, including extensive hands-on experience, preferably with rDNA proteins using immunological, conventional, and non-traditional techniques.

Biotechnology Processes

SENIOR SCIENTIST—Provide technical support to development programs and manufacturing operations. A Ph.D. in Microbiology, Molecular Biology or Biochemistry and relevant experience in antibiotic-producing microorganisms are required. Expertise in state-of-the-art genetic/enzyme analysis techniques desirable, as well as experience with radioisotopic incorporation technology.

We offer competitive salaries and benefits. For prompt confidential consideration, please send detailed curriculum vitae with indication of position desired to: Isabel Connelly, Schering-Plough Corporation, 1011 Morris Avenue, Union, NJ 07083. An Equal Opportunity Employer.



Schering-Plough

POSITIONS OPEN

PHYSICAL SCIENTIST (AEROSOL)

U.S. Army, Dugway Proving Ground, UT is accepting applications for a physical scientist GS-1301-12 starting at \$31,619 per annum. A successful candidate should have a bachelor's or higher degree in physical science with 3 years' professional experience to include a background in aerosol physics or aerosol engineering, with a specific understanding of the physical parameters that influence particle dynamics in the airborne state. Dugway Proving Ground is a major range and test facility with unique capabilities for testing chemical warfare and biological defense systems. Dugway is on a 4-day work week. Monday thru Thursday from 7:00 a.m. to 5:30 p.m. Interested applicants should telephone: 801-522-2181 for application packets. *An Equal Opportunity/Affirmative Action Employer.*

PLANT SYSTEMATICS/EVOLUTION

The Department of Biology of the University of North Carolina at Chapel Hill invites applications for a tenure-track faculty position at the assistant or associate professor level, available July 1987. Individuals studying the systematics or evolutionary process of higher plants using modern methods are encouraged to apply. The successful candidate will be expected to maintain a vigorous, independent research program, and to contribute to graduate and undergraduate teaching activities of the department. Send curriculum vitae, three letters of reference, and a brief description of research interests and objectives to: Plant Systematics Search Committee, Department of Biology 010A, University of North Carolina, Chapel Hill, NC 27514. Only applications received by 10 November 1986 can be assured of full consideration. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL OR RESEARCH ASSOCIATE position available immediately for biochemical studies on structure and chemical mechanism of mitochondrial proton channel. Focus of research on resolution/reconstitution of membrane proteins using biophysical and biochemical methods. Excellent location, benefits, and academic environment. Salary dependent upon experience. Send letter and references to: Dr. D. R. Sanadi, Department of Cell Physiology, Boston Biomedical Research Institute, 20 Staniford Street, Boston, MA 02114. *We are an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW—effective 1 January 1987, or sooner. Cell physiologist or biophysicist to study intracellular Ca^{2+} and pH regulation in heart cells. Experience with fluorescence microscopy and spectrofluorimetry desirable. Applicants should send curriculum vitae, statement of research experience and interests, and list of three persons who may be contacted for reference to:

Dr. Mel Lieberman
Department of Physiology
Duke University Medical Center
Box 3709
Durham, NC 27710
Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE—Division of Endocrinology. Pursue studies of insulin action in rats and in adipocytes (rat and human). Background in metabolism research required. Send curriculum vitae to: Dr. Andrea Dunaif, Division of Endocrinology, The Mount Sinai Medical Center, One Gustave L. Levy Place, Room 23-70, New York, NY 10029. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available September 1986 for 1-year study of the role of hippocampal opioid peptides in seizure mechanisms. Experience with small animal neurosurgery, radioimmunoassay, and immunocytochemistry, as well as knowledge of convulsant and anticonvulsant drug actions desired. Starting salary \$18,000. Application cut-off date: 26 September 1986. Send curriculum vitae and names of three references to: Jacqueline F. McGinty, Department of Anatomy, East Carolina University, School of Medicine, Greenville, NC 27834. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION: available to study mechanism of heavy metal ion binding to algae [(see *Environ. Sci. Technol.* 20, 206 (1986); 20, 627 (1986)]. Send curriculum vitae and names of three references to: Dr. Dennis W. Darnall, Arts and Sciences Research Center, P.O. Box RC, New Mexico State University, Las Cruces, NM 88003.

POSTDOCTORAL POSITION available January at VIRGINIA COMMONWEALTH UNIVERSITY to study processing enzymes of atrial and hypothalamic peptides. Cloning and expression of processing enzymes and of active peptides. Send curriculum vitae and names of three references to: Dr. Robert B. Harris, Department of Chemistry, University of Colorado, Box 215, Boulder, CO 80309. After 1 December: Virginia Commonwealth University, Department of Biochemistry, Box 614, Richmond, VA 23298. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION: available immediately to study the alteration of gene expression in hepatomas and liver during hepatocarcinogenesis. Studies include gene cloning, DNA sequencing, and determining hepatoma-associated nonhistone proteins and chromatin structure. Experience in molecular biology would be preferred. Salary competitive. Send résumé with names of three references to: Dr. Jen-Fu Chiu, Department of Biochemistry, University of Vermont College of Medicine, Burlington, VT 05405.

POSTDOCTORAL POSITION available 15 October 1986 in quantitative fisheries simulation modeling. The successful candidate must have a Ph.D. in fisheries or a related field, a strong quantitative background, computer programming ability, and thorough knowledge of fisheries population concepts such as yield-per-recruit and stock-recruitment. Salary range: \$25,000 to \$28,000 annually. Send résumé, statement of interest and experience, copies of transcripts, reprints of relevant publications, and have two letters of reference sent to: Dr. Ellen K. Pikitch, Oregon State University, Mark O. Hatfield Marine Science Center, Newport, OR 97365. Closing date is 30 September 1986. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

POSTDOCTORAL POSITION: To participate in NIH-funded research projects on regulation of energy metabolism in liver, heart, and brain-derived preparations during interventions with Ca^{2+} -mobilizing hormones, and drugs which alter metabolic states. Submit curriculum vitae and have three letters of references sent directly to: Dr. T. B. Patel, Department of Pharmacology, University of Tennessee, Memphis, Center for the Health Sciences, 874 Union Avenue, 100 Crowe Building, Memphis, TN 38163.

POSTDOCTORAL POSITION TUMOR VIROLOGY

Available immediately, we have recently discovered RNA covalently bound to SV40 TAG and to the oncogene product p53. The RNA's, the bonding and the possible significance to oncogenic transformation will be studied. U.S. citizenship or residency required, funding through NIH training grant. Send curriculum vitae and names of three references to:

Dr. Robert Carroll
Department of Pathology
New York University Medical School
550 First Avenue
New York, NY 10016

POSTDOCTORAL POSITIONS AVAILABLE for multidisciplinary studies concerning (i) structure and function of neuronal nicotinic acetylcholine receptors, or (ii) mechanisms of human neuronal/glia differentiation. Investigations are to encompass bio- and immunochemical, pharmacological, physiological (single channel), and molecular genetic approaches with model cell culture systems in a unique and dynamic institution. Send curriculum vitae, names and addresses of three references, and brief statement of research experience and objectives to: R. J. Lukas, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ 85013. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately for recent Ph.D. interested in intraspecific physiological variation. Experience in invertebrate physiology or biochemical adaptations preferred. Will contribute to studies of osmotic response in a marine copepod and pursue related work. Send curriculum vitae and three letters of reference to: Dr. Ron Burton, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104-6018. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study structure-function relationships of calmodulin-regulated enzymes by affinity and photoaffinity labeling. Experience in protein chemistry and enzymology is desired. Send curriculum vitae and three letters of recommendation to: Dr. Marita M. King, Department of Chemistry, The Ohio State University, 120 West 18 Avenue, Columbus, OH 43210.

POSTDOCTORAL POSITION: Molecular analysis of the human Y chromosome. Research project involves cloning DNA from the Y chromosome and analysis of patients with sex chromosome aberrations. Two-year appointment, available immediately. Send curriculum vitae and names of references to: C. M. Disteche, Department of Pathology SM-30, University of Washington, Seattle, WA 98195.

POSTDOCTORAL POSITIONS (2) available for 2 or 3 years, starting as soon as possible. Studies focused on elucidating the neuropharmacological and synaptic mechanisms controlling jaw movements in guinea pigs. Applicants should have solid training in the use of electrophysiological techniques such as intracellular and extracellular recording, iontophoretic or micropressure ejection of drugs. If desired, some teaching opportunities are also available. Salary dependent upon experience. Send curriculum vitae and brief statement of research goals to: Scott H. Chandler, Department of Kinesiology and the Brain Research Institute, 2854 Slichter Hall, University of California—Los Angeles, Los Angeles, CA 90024.

POSTDOCTORAL POSITION

Position available to study biological and biochemical approaches in tumor cell adhesion to the extracellular matrix. Applicant should be comfortable with immunochromatographic techniques and have a background in basic cell biology. Knowledge of glycolipid and/or glycoprotein chemistry will also be helpful. Send curriculum vitae and names of three references to:

Dr. David A. Cheresh
Research Institute of Scripps Clinic
10666 North Torrey Pines Road
La Jolla, CA 92037

POSTDOCTORAL POSITION available immediately to study the molecular biology of herpes simplex virus glycoproteins. Applicant with a Ph.D. in microbiology, biochemistry, or molecular biology with experience in recombinant DNA technology is desired. Interested candidates should send curriculum vitae and three letters of reference to: Dr. Lenore Pereira, Division of Oral Biology, University of California—San Francisco, HSW-604, San Francisco, CA 94143. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITIONS (M.D. or Ph.D.) in multidisciplinary, interdepartmental research programs in CYSTIC FIBROSIS and EPITHELIAL CELL BIOLOGY. Studies of epithelial cell secretions and secretory processes, epithelial ion transport, epithelial cell culture, and regulatory processes are ongoing. Respiratory, sweat gland, and renal epithelial cells are major foci of interest. In addition, an active mucin/glycoprotein chemistry group participates in the center, and there is strong interest in lung immunology and inflammation. Independently funded investigators supervise all aspects of these studies; postdoctoral positions are through an NIH training grant. Please send résumé, statement of research interest, and names of three references to: D. G. Dearborn, M.D., Ph.D., Department of Pediatrics, Case Western Reserve University, Rainbow Babies and Childrens Hospital, 2101 Adelbert Road, Cleveland, OH 44106. *An Equal Opportunity/Affirmative Action Employer.*

AUSTRALIA
CSIRO
GEOLOGIST/GEOCHEMIST
RESEARCH SCIENTIST/
SENIOR RESEARCH SCIENTIST
A\$27,475-A\$40,410
DIVISION OF MINERALS
AND GEOCHEMISTRY
PERTH, WA

The CSIRO Division of Minerals and Geochemistry undertakes research into mineral exploration, ore-body characterization, mineral beneficiation and mineral extraction.

DUTIES: The appointee will join a team of research scientists developing methods for exploration in deeply weathered (lateritic) terrain.

The particular responsibility will be to carry out geological/geochemical studies of regolith in selected areas in the context of landform development with specific relevance to exploration methodologies. The scientist will also be expected to develop strong research interaction with geologists from the mining industry.

QUALIFICATIONS: Applicants should possess a PhD degree or equivalent qualifications in geology or geochemistry and a keen interest in tropical and arid zone weathering processes, geomorphology and the interrelation of the geochemistry of regolith materials and dispersion patterns from concealed ore deposits. As the research concerns exploration methodology for Precambrian terrain a sound background in hardrock geology will be an advantage.

LOCATION: The appointee will be based at the Division's research laboratory at Floreat Park, Perth, Western Australia, but will also spend time in the field.

TENURE: Indefinite with Australian Government superannuation benefits available.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference No. A3810 should be directed to:

The Chief
 CSIRO Division of Minerals and Geochemistry
 Private Bag PO
 WEMBLEY 6014 WESTERN AUSTRALIA

by 4 weeks from date of publication.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

Associate Director - Therapeutic Systems Development

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking an outstanding scientist to lead and direct a group of scientists charged with evaluating and developing novel drug delivery systems. The successful candidate will play a key role in defining the directions and strategies for the development of a drug delivery program at SK&F.

To be considered, applicants must possess all of the following requirements:

- Ph.D. in Drug Metabolism, Biochemistry, Physiology, Pharmacology or Pharmaceutics.
- 5-10 years experience in a research area directly related to drug delivery.
- Experience in the use of Gamma scintigraphy for the evaluation of dosage form design and behavior in animals and humans.
- Proven experience working in a multidisciplinary team and interacting with clinical investigators.
- Proven scientific skills as evidenced by outstanding publications record.
- Excellent written and oral communication skills.
- Experience supervising a multidisciplinary group of scientists.

SK&F Laboratories is located near Valley Forge, PA in a new, state-of-the-art research complex. We offer an excellent compensation, benefits, and relocation package. Reply in confidence to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1580 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
 A SmithKline Beckman Company



The Howard Hughes Medical Institute and The National Institutes of Health again announce The Program for Research Opportunities for Medical Students 1987-88

HHMI-NIH Research Scholars can spend 9-12 months in one of the 1,000 research laboratories located at the
 NATIONAL INSTITUTES OF HEALTH, Bethesda, MD.

Salary, fringe benefits and travel will be provided.

Further information and application forms may be obtained by writing to the
 Howard Hughes Medical Institute, Research Scholars Program, 9101 Old Georgetown Road, Bethesda, Maryland 20814.

Applications invited from students in all American Medical Schools.

Your request for the application information should be received by December 31, 1986.

Final deadline for return of all application materials is January 15th, 1987.

POSITIONS OPEN

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE LIPID RESEARCH CENTER POSTDOCTORAL POSITION

Applications are invited for a postdoctoral position to join a research group working on various aspects of human lipoprotein structure and metabolism. This well-established research group employs recombinant DNA techniques and monoclonal antibodies to examine lipoprotein structure and function in health and disease. The successful candidate will be encouraged to participate in one of several ongoing research projects. Applicants should have a good background in protein biochemistry, immunochemistry, and/or molecular biology. A background in monoclonal antibody technology and cell culture would be an asset.

The position is available immediately and funding is available for 2 years.

Applications together with a full curriculum vitae including the names and addresses of at least two referees should be sent to:

Dr. Gustav Schonfeld
Director, Lipid Research Center
Washington University School of Medicine
Box 8046, 4566 Scott Avenue
St. Louis, MO 63110

POSTDOCTORAL POSITION: An immediate opening to study the properties and regulation of cell-associated and secretory proteins in immune interferon-treated human leukemic cells. Experience in tissue culture, molecular biology, and protein biosynthesis is essential. Send curriculum vitae, names of three references, and salary expected to: Dr. Joseph M. Wu, Department of Biochemistry, New York Medical College, Valhalla, NY 10595.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY

Position available for Ph.D. molecular biologist, cell culture experience desirable. Duties include cloning and sequencing receptors and developing antisense RNA to receptors. Send curriculum vitae to: D. D. Johnson, Southern Research Institute, Personnel Office, Department B165, P.O. Box 55305, Birmingham, AL 35255-5305. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY OF STREPTOMYCES

NIH-funded position available immediately to investigate regulation of glutamine synthetase by nitrogen compounds in *Streptomyces coelicolor* and nitrogen regulation of antibiotic biosynthesis. Project involves molecular analysis of the promoter of the cloned *S. coelicolor* glutamine synthetase gene, and characterization of *S. coelicolor* mutants defective in the regulation of glutamine synthetase. Background in recombinant DNA technology and molecular genetics desired. The Department of Medical Microbiology and Immunology has a strong history of federal funding, an NIH training grant, and research strengths in molecular biology and immunology. Send curriculum vitae and three names of references to: Dr. Susan H. Fisher, Department of Medical Microbiology and Immunology, University of Kentucky Medical School, Lexington, KY 40536-0084. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN NEUROBIOLOGY to study organization and function of autonomic nervous system in the lumbosacral spinal cord. Experience with immunohistochemical and/or microelectrode recording techniques desirable. Position available for 1 or 2 years; salary: \$17,824. Send curriculum vitae to: I. Nadelhaft, Ph.D., VA Medical Center, University Drive C, Pittsburgh, PA 15240. Telephone 412-683-3000, extension 514. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE. Work on detection, isolation, purification, and identification of growth factors produced by human tumor cells using molecular and immunologic methods. Initial 2 year commitment with opportunity for advancement. Experience in protein isolation and/or molecular biology. Send résumé to: Postdoctoral/JS-001, P.O. Box 12199, Research Triangle Park, NC 27709. Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN PLANT PHYSIOLOGICAL ECOLOGY to participate in an NSF-funded study of the mechanism and ecological significance of photosynthetic utilization of sunflecks in understory microenvironments. Position is available for 2 years starting 1 December 1986. Send curriculum vitae and names of three references to: Dr. Robert W. Pearcy, Department of Botany, University of California, Davis, CA 95616.

Application deadline is 1 November 1986. The University of California is an Affirmative Action/Equal Opportunity Employer and invites applications from all qualified individuals.

POSTDOCTORAL RESEARCH ASSOCIATE. Position is available to study the atrial natriuretic factor receptor. Techniques to be used include monoclonal antibody production, cell culture, ligand binding studies, and radioimmunoassays. Applicants should have a Ph.D. or equivalent with background in biochemical techniques used to study receptors/membrane bound proteins. Appointment will be for 2 years with salary at \$20,000 per year. Send curriculum vitae and three letters of reference to: Dr. Gary E. Isom, Department of Pharmacology and Toxicology, School of Pharmacy and Pharmaceutical Sciences, Purdue University, West Lafayette, IN 47907. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATES, junior/senior levels, expected fall 1986. Molecular biology, protein chemistry, and immunology of the Marek's disease herpesvirus (MDHV) system. **Junior position:** Ph.D. (or M.D./D.V.M. with strong research background) in molecular biology and biochemistry (preferably recombinant DNA technology) and ideally some virology/immunology. **Senior position:** same, plus 2 years' postdoctoral experience. Send résumé to: Dr. L. F. Velicer, Microbiology, Michigan State University, East Lansing, MI 48824-1101; telephone 517-355-6605. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN TUMOR BIOLOGY

Available immediately, for Ph.D. in biochemistry, cell, or molecular biology to participate in ongoing study in the mechanism of tumor invasion and metastasis, in particular the role of proteases and cell-cell and cell-matrix interactions. Send résumé and list of three references to: Mustafa Dabbous, Ph.D., University of Tennessee, Memphis, The Health Science Center, 894 Union Avenue, Memphis, TN 38163. An Equal Opportunity/Affirmative Action Employer.

PRINCETON UNIVERSITY DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING PROGRAM IN APPLIED AND COMPUTATIONAL MATHEMATICS POSTDOCTORAL RESEARCH POSITIONS

Individuals are sought with expertise for the following four postdoctoral research positions:

- 1) boundary integral methods for free surface flow problems,
- 2) spectral numerical methods for turbulent heat transfer,
- 3) asymptotic/numerical methods for conformal mapping,
- 4) currently existing computer programs for transonic and viscous flow calculations.

A Ph.D. is required for all positions. Please send résumé with three references to:

Department of Mechanical and
Aerospace Engineering
Code RA/FACM
Room 212 Engineering Quadrangle
Princeton University
Princeton, NJ 08544

Princeton University is an Affirmative Action/Equal Opportunity Employer, M/F.

Biological Scientists in Metabolic Diseases



An equal opportunity employer

Pfizer Central Research has openings for PhD scientists in its Metabolic Disease Drug Discovery Program. These positions require you to have a strong postdoctoral training in biochemistry, and a knowledge of mammalian physiology, pharmacology, and/or cell biology. Previous experience in the areas of tissue culture techniques, growth factor(s), stimulus/receptor coupling, glucose and lipid metabolism, hormone action and membrane structure and function will prove advantageous. You will be a member of one of our discovery teams seeking new agents to treat several important disease states including insulin resistance, the microvascular complications of diabetes and atherosclerosis. It is not necessary that you be trained in these specific areas, but you must display the creativity necessary to carry out innovative research focused on elucidating new pharmacological approaches to the above diseases.

These positions offer excellent opportunities for scientists with initiative to gain experience in the field of innovative pharmaceutical research in a large successful company. Excellent equipment and support systems are available at our newly constructed research facilities. Publications and interaction with external scientists are encouraged and facilitated by the proximity of our laboratories to many top New England universities and medical centers. In addition, we offer a competitive compensation, benefit and relocation package, as well as the opportunity to live in one of the most attractive shoreline areas of Connecticut. Please send resume and brief description of research interests to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340

IMMUNOLOGISTS/IMMUNOCHEMISTS/ TUMOR AND CELL BIOLOGISTS CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY

The **CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY**, a specialized cancer research and treatment center, is recruiting for **senior and junior researchers**. The Center is devoted to basic and applied multidisciplinary research aimed at improving the management and control of cancer and allied diseases. Potential candidates should be experienced in biochemical, genetic, and molecular biological techniques to study problems in the areas of molecular immunology, immunobiology, and molecular genetics. Special consideration will be given to those individuals with interest in tumor immunity, immunochemistry, tumor imaging and therapy, tumor biology, and tumor genetics. Excellent laboratory facilities are available to successful candidates expected to develop independent and vigorous research programs. Applicants must hold a Ph.D. or M.D. degree and have demonstrated excellence in research. The levels of appointment and salary are commensurate with qualifications and experience. Junior research candidates will be expected to indicate evidence of their potential by a publication record appropriate to their experience, as well as letters of recommendation. Senior research candidates must show evidence of a strong research accomplishment and grant support. **Postdoctoral candidates** are invited to apply.

The Center is located on the Newark campus of the University of Medicine and Dentistry of New Jersey (UMDNJ) and is closely affiliated with several of UMDNJ's clinical research and educational programs. In close proximity are excellent opportunities for educational, research, and cultural exchange among the many outstanding institutions within the greater New Jersey-New York Metropolitan area. Ample housing exists in several adjacent communities and within short commuting distances of both the Center and New York City.

Applications, to include curriculum vitae, bibliography, a statement of career and research goals and the names of three references should be sent to:

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

Center for Molecular Medicine and Immunology
1 Bruce Street, Newark, New Jersey 07103

An Equal Opportunity Employer

Biological NMR

Smith Kline & French Laboratories is seeking a Senior or Associate Senior Investigator to join its biological nuclear magnetic resonance program. Research projects involve high resolution solution NMR, solid state NMR of biopolymers, and *in vivo* NMR of a variety of systems. The SK&F biological NMR group has a significant publication record and is well equipped for experimental NMR and off-line data processing.

Candidates should have expertise and postdoctoral experience in one or more of the areas of biological or biochemical NMR, should have a strong experimental background and facility with NMR hardware, and should be able to design and execute experiments using a range of NMR instrumentation in collaboration with specialists in chemistry and biology. Experience with *in vivo* NMR is particularly desirable.

SK&F Laboratories is located near Valley Forge, PA in a new, state-of-the-art research complex. We offer an excellent compensation, benefits, and relocation package. Reply in confidence to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1582 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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BIOTECHNICAL/ POSTDOCTORAL OPPORTUNITIES

Interferon Sciences, Inc. is a growing biotechnology company located at the heart of the Pharmaceutical Industry in central New Jersey. Applications are invited at the Postdoctoral level for research positions in the following areas:

IMMUNOCHEMISTRY

- Immunochemists with experience in production and purification of antibodies and experience in immunoassay development and affinity chromatography. (MJL)
- Cell Receptor Biochemists with experience in the characterization and purification of receptor proteins and production of antibodies to them. (MJL)

ANALYTICAL BIOCHEMISTRY

- Biochemists with extensive expertise in peptide synthesis, purification, protein sequencing and amino acid analysis. HPLC and electrophoresis experience highly desirable. (KF)

MOLECULAR GENETICS

- Molecular Biologists to work on regulation of gene expression in procaryotes and eucaryotes. Experience in: cDNA synthesis and screening, DNA sequencing, vector construction, expression plasmids and *IN VITRO* mutagenesis. (DT)

Please refer to position codes. Send resume to:
L. Zuckerman, Director of Personnel.

 **INTERFERON**
SCIENCES, INC.

783 Jersey Avenue, New Brunswick, NJ 08901

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position available for an electrophysiologist to characterize the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord physiology and/or tract-tracing and histological techniques. Please send curriculum vitae with names of three references by 15 November 1986 to: **Dr. Julia K. Terzis and Dr. Kenneth J. Smith, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

POSTDOCTORAL RESEARCH ASSOCIATES (Two)

We seek two recent doctorates to join the Cyclotron-PET program at Brookhaven National Laboratory.

SYNTHETIC ORGANIC CHEMISTRY.

A position is available for a recent doctorate in synthetic organic chemistry to participate in the development of imaginative new organic synthetic methods for incorporating the short-lived positron emitters carbon-11 and fluorine-18 ($t_{1/2} = 20.4$ minutes and 110 minutes) into organic molecules. In this position there will be broad interaction with a large multidisciplinary team of scientists whose research focus is on the study of biochemistry in the living human and animal brain and heart using positron emission tomography (PET). Specific interests include the development of rapid synthetic methods for the fluorination of organic molecules and for incorporating one-carbon precursors into complex organic molecules. However, emphasis is placed on broad knowledge of modern synthetic organic chemistry.

BIOCHEMISTRY

A position is available for a recent doctorate in biochemistry to study the mechanisms of radiotracer interaction with living systems using the standard methods of biochemistry in addition to in vivo imaging using positron emission tomography. Current areas of research include the study of neurotransmitter receptors, enzyme activity, and tissue proliferation. In this position, there will be broad interaction with a multidisciplinary team of scientists and physicians whose research focus is the use of PET to characterize and quantitate biochemical processes in the normal state and in the disease state in the living animal and human body.

Applicants should send résumé stating which position, transcripts, and request that three letters of recommendation be forwarded to: **Dr. Alfred P. Wolf, Chairman, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973. Equal Opportunity Employer, M/F.**

POSTDOCTORAL TRAINING OPPORTUNITIES IN DRUG DELIVERY RESEARCH

The research emphasis of this multidisciplinary drug delivery research/training program is on the innovative applications of biochemical and chemical principles to improve the transport of drugs through biological membranes and to direct drugs to specific cellular and subcellular sites. Specific areas of research include: (i) the development of cell culture systems as models for the epithelial and endothelial cellular barriers; (ii) use of these cell culture systems to study the transport and metabolism of drugs; and (iii) development of carrier-based systems for enhancing membrane flux and for targeting of drug to specific cellular sites. Applicants should have a Ph.D. degree in biochemistry, pharmacology, chemistry, pharmaceutical chemistry, or related disciplines. Send curriculum vitae with names and addresses of three references to: **Dr. Ronald T. Borchardt, Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66045. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE

Postdoctoral position available immediately to study the regulation of collagen gene expression during cell differentiation or transformation. Experience in molecular biology preferred. Please send résumé to: **Dr. Barbara D. Smith, Boston University Medical Campus, Biochemistry Department, 80 East Concord Street, K725, Boston, MA 02118.**

An Equal Opportunity Employer, M/F

POSITIONS OPEN

PROFESSOR AND HEAD OF FOOD SCIENCE, University of Georgia, Georgia Station, Experiment (Griffin), Georgia. The University of Georgia is seeking a dynamic individual to lead the Department of Food Science at the Georgia Station. The department has 11 full-time research faculty, 20 support personnel, and a strong graduate program. **QUALIFICATIONS:** Earned doctorate in food science or closely related discipline, scholarly research record, and commitment to basic and applied research, as well as to graduate education; demonstrated leadership qualities and ability to communicate effectively. **APPLICATION DEADLINE:** 10 December 1986. Send detailed dossier of work experience, plus four letters of reference. Nominations are welcomed. To apply or for further information, contact: **Dr. Brahm P. Verma, Chair, Search Committee, University of Georgia, Georgia Station, Experiment, GA 30212-5099. Telephone: 404-228-7217. The University of Georgia is an Equal Opportunity/Affirmative Action Institution.**

UNIVERSITY OF PITTSBURGH PROFESSOR OF OCCUPATIONAL MEDICINE

The University of Pittsburgh invites applications and nominations to fill a tenured professorship to serve as director of its occupational medicine program. This is a joint search by the Graduate School of Public Health and the School of Medicine. Incumbent will direct an accredited residency program in occupational medicine; will head teaching programs in Graduate School of Public Health and the School of Medicine; will develop relevant research programs; and will administer a program providing clinical and consultative services in occupational medicine.

Candidates must have an M.D. degree or equivalent and extensive experience in occupational medicine. Experience should include activities in the preventive, clinical, and research aspects of the field.

Send applications and nominations before 15 October 1986 to: **Chairman, O. M. Search Committee, E-603 WPIC, 3811 O'Hara Street, Pittsburgh, PA 15213.**

The University of Pittsburgh is an Affirmative Action Employer

RESEARCH ANALYST to research and develop new techniques for producing bovine serum and bovine albumen reagents for diagnostic and testing purposes. Improve methods of manufacturing human animal proteins and protein fractions. Determine cost feasibility of manufacturing methods and profit potential of products. Must have bachelor's degree with major in biology or physiology, 6 months of experience as laboratory assistant, experience in laboratory techniques in producing, analyzing, and testing serum and albumen products. Must be familiar with laboratory equipment used in procedures. Experience in statistical analysis. Will supervise two technicians. Salary \$2442 per month. Job site/interview Carson, CA. Send résumé to: **Job number HO6600, P.O. Box 9560, Sacramento, CA 95823-0560, not later than 27 September 1986.**

RESEARCH ASSOCIATE position available for an individual interested in studying the role of free radicals in cellular injury. Background in cell biology and/or drug metabolism desired. Send curriculum vitae to: **Dr. Gerald M. Rosen, Department of Pharmacology, Duke University Medical Center, Box 3813, Durham, NC 27710. Duke University is an Affirmative Action/Equal Opportunity Employer.**

SCIENTIST/PHYSICIST to serve as **FIELD TEST MANAGER** for Albuquerque firm. Requires 2 years of college physics and 8 years of general fielding experience of which at least 3 years must be in fielding thermal radiation sources (TRS). Higher academic preparation considered in lieu of some general fielding experience. Duties: thermal radiation research; design, conduct, and report synergistic blast and thermal radiation research; blast and shock transducer work; high-speed photography. Salary: \$42,000 per year, 40 hours per week. Send ad and résumé to: **New Mexico Employment Security Department, 6209 Hendrix NE, Albuquerque, NM 87110. Job number 72109, no later than 12 October, 1986.**

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR/RESEARCH ASSOCIATE. A nontenure position in the Mary Babb Randolph Cancer Center, West Virginia University School of Medicine, responsible for the daily operation of a new Monoclonal Antibody and Protein Analysis Core Facility. Strong background in protein analysis is required. A Ph.D. is desirable, but not essential. The successful applicant will be expected to plan and carry out projects involving protein purification and sequencing, peptide synthesis, and the production and characterization of monoclonal antibodies. A joint appointment in biochemistry may be offered to qualified candidates. A competitive salary commensurate with qualifications available. Send curriculum vitae and three letters of references to: **Dr. Bruce Caterson, Department of Biochemistry, West Virginia University School of Medicine, Morgantown, WV 26506.**

RESEARCH ASSOCIATE: Develop theoretical/computational methods to study the electronic structure, lattice dynamics, and related physical properties of bulk materials, metal surfaces, and interfaces using supercomputers. Must assist in training Ph.D. students, postdoctoral and visiting scholars in these methods. Minimum requirements: Ph.D. in solid state physics and 2 years of experience as a research/teaching assistant using large scale high speed computers in computational solid state physics. Also, must be able to demonstrate through publications in professional journals an ability to apply in an academic research setting the following: (i) Band theory and related computational methods including the study of microscopic electronic structure of bulk materials, metal surfaces and interfaces; (ii) Lattice dynamics (the study of interatomic forces) and structural phase transitions. Forty hours per week, 9:00 a.m. to 5:00 p.m. Salary: \$24,000 per year. Send résumés to:

**Illinois Job Service
910 South Michigan Avenue, Room 333
Chicago, IL 60605**

**Attention: Len Boksa
Reference number 5639/B
An Employer Paid Ad**

RESEARCH ASSOCIATE—PLASMA PHYSICS. Require Ph.D. in physics and 2 years of experience or 2 years of postdoctoral experience in theory, computational modeling and design, or quasi-optical gyrotrons and free electron lasers. To provide theoretical analysis in connection with selective experimental programs and to perform fundamental theoretical and numerical studies. Full-time position. Salary: \$32,500 per year. Send résumé to: **Maryland Department of Employment and Training, Room 201-B, 1123 North Eutaw Street, Baltimore, MD 21201. Refer to order number 6014662. Location: College Park, MD.**

LA TROBE UNIVERSITY MELBOURNE AUSTRALIA

SCHOOL OF BEHAVIORAL SCIENCES RESEARCH FELLOW IN PSYCHOLOGY

Applications are invited for a fellowship funded under the National Research Fellowships Scheme. The appointee is to work with **Dr. B. McKenzie**, La Trobe University, (03) 478 3122, extension 2151 and **Professor R. Day**, Monash University, (03) 541 0811, extension 3979 on the development of spatial representation in infancy and early childhood. Applicants should have a Ph.D. and, preferably, research experience with infants or young children. Although based mainly at La Trobe University, the appointee may also be involved in testing at Monash University. The fellowship is tenurable for a period of 2 years from the beginning of 1987.

CLOSING DATE: 1 November 1986. **REFERENCE NUMBER:** AO/131/101. **SALARY:** A\$27,233 (Depending on qualifications and experience a higher salary may be negotiated.)

Applications (marked confidential) including reference number, names of three referees and curriculum vitae should be forwarded to: **The Staff Officer, La Trobe University, Bundoora, Victoria, 3083, Australia. Equal Opportunity is University Policy.**

SIBIA is an established biotechnology company involved in a wide spectrum of innovative research programs. SIBIA, with a staff comprised of leading scientific staff members, provides an exceptional scientific research environment in which to work plus a modern laboratory located near the ocean on Coast Boulevard in La Jolla. The broad range of research programs encourages multidisciplinary interaction.

Positions open are:

MICROBIAL PHYSIOLOGIST/ GENERAL MICROBIOLOGIST

Microbial Physiologist and General Microbiologist openings (B.S./M.S. Degree) are available immediately. Prefer background in anaerobes. Duties will include isolation, characterization of anaerobes, anaerobic metabolism and physiology studies. Experience with HPLC and capillary GC useful.

We offer a comprehensive benefits package and competitive salaries. For confidential consideration, please submit your curriculum vitae, a statement of research interests and goals and the names of three professional references to: **SIBIA, Department, 4053, 505 Coast Boulevard South, La Jolla, CA 92037.**

SIBIA

**The Salk Institute
Biotechnology/Industrial Associates, Inc.**

An Equal Opportunity Employer

Postdoctoral Scientist Enzymologist/ Protein Biochemist

The Department of Cell Biology at Smith Kline & French Laboratories, located near Valley Forge, Pennsylvania, is seeking a Protein Biochemist to join a multidisciplinary team developing new therapeutic strategies for the treatment of colon carcinoma. The successful applicant will purify and characterize membrane-bound fucosyl transferases from human colon epithelial cells.

Candidates should have:

- Ph.D. in Biochemistry or Molecular Biology.
- expertise in protein purification and enzymology.
- familiarity with carbohydrate chemistry.
- 0-2 years postdoctoral experience.
- growing publication record and good communication skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your curriculum vitae and the names of three references to: Robert F. Obst, R&D Employment Consultant, SmithKline Beckman Corporation, 1592 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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POSITIONS OPEN

SOLID TUMOR CYTOGENETICIST

The Section of Hematology/Oncology at The University of Chicago has an active, productive laboratory in leukemia cytogenetics, and now intends to expand into solid tumor cytogenetics. We wish to recruit a qualified scientist, M.D. or Ph.D. Applicants must have at least 2 years of experience in the chromosome analysis of human solid tumors using various banding techniques to develop and direct this program. The cancer cytogenetics laboratory will work closely with other research laboratories involved in cell biology and molecular genetics of malignant cells. The position, at either faculty or research associate level, will depend on the qualifications and experience of the individual selected. Interested applicants should send curriculum vitae and references to: **Dr. Janet D. Rowley, Box 420, Section of Hematology/Oncology, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.** The University of Chicago is an Affirmative Action Employer.

ANNOUNCEMENT

ANNOUNCEMENT

The Department of Agriculture published Guidelines for Biotechnology Research in the *Federal Register* on 26 June 1986 (51 FR 23367-23393). The department will conduct 1-day public information meetings to obtain comments on these proposed guidelines. Oral presentations will be limited to 10 minutes and written submissions will be required, with no time for discussion. **LOCATIONS AND DATES:** (i) San Francisco, CA; 19 September 1986—450 Golden Gate Avenue, Room 2007; (ii) St. Louis, MO; 23 September 1986—1520 Market Street, Room 1612; and (iii) Washington, DC; 26 September 1986—Jefferson Auditorium, South Building, U.S. Department of Agriculture (USDA). Each meeting at 9:00 a.m. **CONTACT:** Dr. John Patrick Jordan, Administrator, CSRS, USDA, Room 304-A, Administration Building, 14th and Independence Avenue, SW, Washington, DC 20250; telephone: 202-447-4423.

COURSE

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION

22 TO 27 FEBRUARY 1987

This course will consist of lectures in methodology with comprehensive syllabus covering receptors, gene transcription, mRNA and protein synthesis, recombinant DNA, protein hormones, and cyclic nucleotides.

Co-directors: **W. T. Schrader and B. W. O'Malley**

Fee: \$365 (\$245 fellow)

For further information, contact:

Bonnie Cuthbert
Department of Cell Biology
Baylor College of Medicine
Houston, TX 77030
713-799-6200

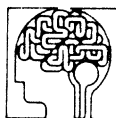
DEADLINE—30 January 1987

PROGRAM

Ph.D. to M.D. PROGRAM UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

This unique, 24-month intensive curriculum in medical education will admit the seventeenth entering class on 15 June 1987. Candidates must have an earned Ph.D. degree in a natural, physical, or engineering science or in mathematics. There are no restrictions on an applicant's nationality, citizenship or present country of residence. Each year the program has accepted a few candidates who are noncitizens. All candidates should present the results of the Medical College Admissions Test and/or Graduate Record Examinations. Requests for application materials should be directed to: **Ph.D. to M.D. Program (R-123), University of Miami School of Medicine, P.O. Box 016960, Miami, FL 33101; telephone: 305-547-6851.**

LECTURE



FIDIA RESEARCH FOUNDATION PRESENTS THE SECOND RITA LEVI-MONTALCINI AWARD LECTURE

"G PROTEINS AND TRANSMEMBRANE SIGNALING" Honoree and Speaker **Alfred G. Gilman, M.D.** University of Texas Health Science Center on **29 September 1986 at 4:00 p.m.** at Georgetown University Medical Center Medical-Dental Building, 3900 Reservoir Road, NW, Washington, DC.

For Further Information Contact: **FIDIA Research Foundation, 1775 K Street, NW, Suite 801, Washington, DC 20006. Telephone: 202-857-4277. Tel. ex: 4970490.**

CONFERENCE

CONFERENCE ON COOPERATION IN UNDERGRADUATE SCIENCE 13 to 15 November 1986

Sponsored by **FIVE COLLEGES, INC.**
with support from the
NATIONAL SCIENCE FOUNDATION

Faculty and administrators representing a wide range of undergraduate liberal arts colleges and small universities will meet to explore the potential of various forms of institutional collaboration to help meet the needs of science instruction at the undergraduate level. Participation is by invitation. For more information contact:

Harmon Dunathan
Dean of Faculty
Hampshire College
Amherst, MA 01002

Telephone: 413-549-4600, extension 378

FELLOWSHIPS

IMPERIAL CANCER RESEARCH FUND RESEARCH FELLOWSHIP

A postdoctoral fellowship is available to work on gene expression in mammalian cells. The molecular mechanisms and DNA sequences involved in the control of gene expression will be investigated. Candidates should have experience in molecular biology and recombinant DNA technology.

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For further details, contact: **Dr. Mike Fried on 01 242 0200, extension 2297.** Please send full curriculum vitae and names of three references to: **The Personnel Officer, Imperial Cancer Research Fund, Lincoln's Inn Fields, London, England WC2A 3PX** quoting reference: 129/86.

POSTDOCTORAL FELLOWSHIP in experimental hematology: Responsibilities include participation in research studying hematopoiesis in the human. Research will involve comparisons of normal and abnormal differentiation of bone marrow and blood. Special emphasis will be given to studying regulations and proliferation of the different lineages within marrow. A thorough knowledge of the clinical aspects of abnormal differentiation is essential. Candidate should have a background in hematology, leukocyte biology, progenitor assays, monoclonal antibodies, and flow cytometry. We require either an M.D. with research experience or a Ph.D. with an understanding of clinical hematology.

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POSTDOCTORAL NUTRITION TRAINING at the **University of Pennsylvania Medical Center.** Nine 1-year appointments available 1 July 1987. NIH-sponsored Research traineeships in cancer and nutrition (**James Mullen, M.D.,** Program Director) and clinical nutrition (**David Kritchevsky, Ph.D.,** Program Director) and clinical fellowships in nutrition/metabolism (**James Mullen, M.D.,** Program Director) are awarded on an equal opportunity basis. Research traineeships with core didactic and nutrition research components are available for M.D.'s with 2 years of residency training and for Ph.D.'s with at least 3 years of residency training may apply for clinical fellowships with the hospital of the University of Pennsylvania Nutrition Support Service. Application deadline 1 February 1987. Contact: **Irene Feurer, M.S.Ed., Nutrition Support Service, 2 Piersol, HUP, 3400 Spruce Street, Philadelphia, PA 19104; telephone: 215-662-3223.**

SYMPOSIUM

SHORT-TERM GENETIC BIOASSAYS IN THE EVALUATION OF COMPLEX ENVIRONMENTAL MIXTURES

The fifth edition of this biennial symposium will be held 20 to 23 October 1986 at the Sheraton University Center, Durham, NC, under the sponsorship of the Genetic Toxicology Division, U.S. Environmental Protection Agency, Research Triangle Park, NC.

Topics to be discussed include: new chemical and biological methods in complex mixtures research; indoor air pollution; hazardous wastes; genetic toxicity in aquatic organisms; integrated in situ monitoring; chemical transformation of atmospheric genotoxins; exposure assessment, molecular dosimeters, and risk assessment for complex mixtures. **Registration forms must be submitted by 1 October 1986.**

For further details and registration forms, write or telephone: **Dr. Shahbeg Sandhu, Scientific Coordinator, U.S. Environmental Protection Agency, MD-68, Research Triangle Park, NC 27711. Telephone: 919-541-3850.**

TRAINEESHIPS

NEUROSCIENCE TRAINING PROGRAM

The University of Connecticut Health Center invites applications for predoctoral and postdoctoral fellowships in communicative sciences (hearing and chemical senses), molecular, cellular, and neural biology. This is an interdisciplinary program involving the Departments of Anatomy, Biochemistry, Microbiology, Neurology, Oral Biology, Pharmacology, Physiology, Psychiatry, and Surgery. Stipends for graduate students are currently \$8150 (including health plan) plus tuition. Postdoctoral awards conform to NIH guidelines. Open to U.S. citizens or permanent residents. Write to: **Dr. D. Kent Morest, Neuroscience Program, University of Connecticut Health Center, Farmington, CT 06032. Telephone: 203-674-2645.**

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