Lastly, two chapters make it clear that attachment of ubiquitin to histones and cell surface receptors such as the lymphocyte homing receptor appears not to lead to the degradation of these conjugates but rather may serve to regulate or modify their function. Though the enzymes responsible for conjugate formation and reversal in these systems are probably similar to those that have been described in the protein degradation system, the rules that define their specificity may be different.

Because ubiquitin is such a "new" protein, there is little in this volume of which those now working closely with the systems described will be unaware. Such workers will, however, probably welcome this as the first book of its type on the subject. For the as yet uninitiated biochemists, immunologists, neuropathologists, cell biologists, geneticists, and others who are likely to find themselves trying to answer the question What does ubiquitin do? the book is a resource for formulating their own ideas.

> HARRY T. SMITH Department of Biochemistry, St. Jude Children's Research Hospital, Memphis, TN 38101-0318

Books Received

Anomodontia. Gilliam M. King. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York). xii, 174 pp., illus. Paper, \$138.50. Handbuch der Paläoherpetologie, vol. 17C

Assessment of Young Developmentally Disabled **Children**. Theodore D. Wachs and Robert Sheehan, Eds. Plenum, New York, 1988. xviii, 419 pp. \$49.50. Per-spectives in Developmental Psychology.

Atomic and Molecular Processes with Short In-**Tense Laser Pulses** André D. Bandrauk. Plenum, New York, 1988. x, 481 pp., illus. \$92.50. NATO Advanced Science Institutes Series B, vol. 1/1. From a workshop, Lennoxville, Quebec, July 1987. The Bacteriophages. Vol. 1. Richard Calendar, Ed.

Plenum, New York, 1988. xviii, 596 pp., illus. \$105. The Viruses

The Breakthrough. The Race for the Superconductor. Robert M. Hazen. Summit Books (Simon and Schuster), New York, 1988. 271 pp., illus., + plates. \$18.95. A personal account by a scientist at the Carnegie Institution of Washington. Environmental Biology of Agaves and Cacti. Park

S. Nobel. Cambridge University Press, New York, 1988. x, 270 pp., illus. \$59.50. Finite Element Methods. H. R. Schwarz. Academic

Press, San Diego, CA, 1988. x, 386 pp., illus. \$84.95; paper, \$34.95. Computational Mathematics and Applications. Translated from the German edition (Stuttgart, 1984) by Caroline M. Whiteman.

Fused Pyrimidines. Part 3, Pteridines. D. J. Brown. Wiley-Interscience, New York, 1988. xxx, 730 pp., illus. \$225. The Chemistry of Heterocyclic Compounds, vol. 24, pt. 3.

Geometry of Supersymmetric Gauge Theories. Including an Introduction to BRS Differential Algebras and Anomalies. François Gieres. Springer-Verlag, New York, 1988. viii, 189 pp. \$20.60. Lecture Notes in Physics, vol. 302.

Mathematics and the Unexpected. Ivar Ekeland. University of Chicago Press, Chicago, 1988. xiv, 146 pp., illus. \$19,95. Translated from the French edition (Paris, 1984) by the author.

Numerical Analysis 1987. D. F. Griffiths and G. A. Watson, Eds. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xii, 300 pp., illus. Paper, \$54,95. Pitman Research Notes in Mathematics, vol. 170. From a conference, Dundee, Scotland, June 1987. 100 Families of Flowering Plants. Michael Hickey

and Clive King. 2nd ed. Cambridge University Press, New York, 1988. xvi, 619 pp., illus. \$75. Opportunities for Phytochemistry in Plant Bio-technology. Eric E. Conn, Ed. Plenum, New York, 1988. xii, 201 pp., illus. \$49.50. Recent Advances in Phytochemistry, vol. 22. From a meeting, Tampa, FL, June 1987. June 1987

Optical Particle Sizing. Theory and Practice. Gérard Gouesbet and Gérard Gréhan, Eds. Plenum, New York, 1988. xii, 642 pp., illus. \$115. From a symposium, Rouen, France, May 1987. Patterns of Human Growth. Barry Bogin. Cam-

bridge University Press, New York, 1988. viii, 267 pp., illus. \$54.50; paper, \$17.95. Cambridge Studies in Biological Anthropology, vol. 3. **Perspectives in Basic and Applied Toxicology**.

Bryan Ballantyne, Ed. Wright, London, 1988 (U.S. distributor, PSG, Littleton, MA). xii, 393 pp., illus. \$125

Plantwatching. How Plants Remember, Tell Time,

Finantwatching. How Plants Remember, 1ell Time, Form Partnerships and More. Malcolm Wilkins. Facts on File, New York, 1988. 207 pp., illus. \$29.95. Quarks, Quasars, and Quandaries. Gordon J. Au-brecht II. American Association of Physics Teachers, College Park, MD, 1987. x, 342 pp., illus. Paper, \$26. From a conference, Batavia, IL, April 1986. Includes papers on teaching modern physics as well as topics in

Ring Theory. Vol. 2. Louis H. Rowen. Academic Press, San Diego, CA, 1988. xiv, 462 pp. \$84. Pure and Applied Mathematics, vol. 128.

1989 GERARD PIEL AWARD FOR SERVICE TO SCIENCE IN THE CAUSE OF HUMANKIND

Nominations are requested for the first Gerard Piel Award to be presented by AAAS at the 1989 Annual Meeting in San Francisco. The Award, established by the Board of Directors of Scientific American, recognizes contribution to the formation of public policy and opinion respecting the wise use of science in the cause of human well-being and fulfillment. It may recognize life work or episodic contributions to such issues as population increase, economic development, poverty and environmental conservation. The prize consists of \$10,000 and a medal. Both individuals and organizations are eligible.

No nomination form is required, but all nominations should be typed and should include the following information: nominee's name, address, institutional affiliation and title; a brief biographical resume; and a statement of justification for the nomination. Organizational nominations should include information about the nature, form and work of the organization. All nominations must include the name, address and telephone number of the individual making the nomination.

Nominations, as well as questions about the award, should be addressed to Dr. Albert H. Teich, Head, Office of Public Sector Programs, AAAS, 1333 H Street, N.W., Washington, D.C. 20005. (Telephone 202/326-6600)

Deadline for receipt of nominations is November 15, 1988.

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mRNA Isolation Kit

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terfacing instruments with computers and enables test parameters to be stored and recalled. The sample compartment has an eight-cell automatic-positioning sample platform. The spectrograph features a dual entrance slit. The illumination section has both a quartz-envelope tungsten-halogen lamp and a deuterium lamp. \$13,500. Milton Roy Analytical Products Division. Circle 441.

Literature

Supercritical Fluid Chromatography describes modular and individual systems for supercritical fluid chromatography (SFC) and how gas chromatographs can be adapted for SFC. Isco. Circle 462.

The Antibodies catalog features antibodies, antigens, complements, mouse reagents, density gradient media, extracellular matrix, lab equipment, and disposable products. Accurate Chemical & Scientific. Circle 463.

Micro to Ultra is a 40-page catalog of centrifuge tubes and accessories. Sarstedt. Circle 464.

Carbon Dioxide Incubators Are Specially Designed to Fight Contamination is a data sheet on a self-decontamination cycle incorporated into a line of carbon dioxide incubators. Hotpack. Circle 465.

Recycling Systems Drastically Reduce Your Solvent Purchase and Waste Disposal Costs is a brochure about solvent recycling systems. B/R Instrument. Circle 466.

Model Z-9000 Simultaneous Multi-Element Zeeman Graphite Furnace AA Spectrophotometer is a brochure that describes a spectrophotometer that can determine four elements in one atomization firing. Hitachi Instruments. Circle 496.

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



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

POSITIONS OPEN

ANALYTICAL CHEMISTRY. TENURE-TRACK FACULTY POSITION at the Department of Chemis-try, San Diego State University. Applications are being accepted for a tenure-track position as assistant professor in analytical chemistry beginning fall 1989. Established and funded individuals will also be considered for appointment at a senior level. The successful candidate will have a Ph.D. in analytical chemistry and postdoctoral experience. We are particularly interested in individuals whose research complements that of existing faculty and which emphasizes electrochemistry or spectroelectroche-mistry. The successful applicant will be expected to develop a vigorous independent research program, su pervise Ph.D. and M.S. students, and participate in the graduate and undergraduate teaching programs. Applica-tions, including curriculum vitae, list of publications, summary of past accomplishments, a detailed plan of future research, and three letters of recommendation, should be sent to: The Search Committee Chair, Department of Chemistry, San Diego State Universi-ty, San Diego, CA 92182 by 15 December 1988. San University is an Affirmative Action/Equal Op-Diego State portunity Title IX Employer, and encourages applications from women and minorities.

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Professor Paul A. Grieco Department of Chemistry Indiana University Bloomington, IN 47405

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Environment Canada, the National Hydrology Research Centre in Saskatoon, Saskatchewan, requires an AQUATIC MACROPHYTE ECOLOGIST to plan and conduct applied and basic research in aquatic macro-phyte ecology. The individual will design and implement field and laboratory studies to investigate various aspects of macrophyte ecology in lakes and rivers to include the role of nutrients, lights, sediment structure, flow regime and toxic chemicals. You require a doctorate degree in and toxic chemicals. You require a doctorate degree in biology of limnological botany, and experience in the area. *Preference will be given to Canadian citizens*. Apply to: Doug Kenney, Human Resourcing Officer, Public Service Commission of Canada, 1010-1867 Hamilton Street, Regina, Saskatchewan, S4P 2C2; tele-phone: 306-780-7027. Competition #S-88-52-0124-0680-(A). Closing date: 18 November 1988.

ASSISTANT PROFESSOR-The Department of Neurology at the Medical College of Virginia, Virginia Commonwealth University, invites applications for a nontenure-track faculty position in molecular neurobiolnontenure-track faculty position in molecular neurobiol-ogy research. Applicants with at least 2 years of postdoc-toral experience, Ph.D. or M.D. degree, and a thorough knowledge and background in patch and voltage clamp technology and neurophysiology are desired. Send cur-riculum vitae to: Dr. R. J. DeLorenzo, Professor and Chairman of Neurology, Box 599, MCV Station, Richmond, VA 23298–0599. Virginia Commonwealth University is an Eard Opnostumity Affirmating Action Fun-University is an Equal Opportunity Affirmative Action Employer. Women and minorities are encouraged to apply.

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ASSISTANT PROFESSOR tenure-track position(s) to begin 1 September 1989. Ph.D. required. Duties include teaching introductory general biology and upper-level cell biology or evolutionary biology. Candidates should have a commitment to excellence in teaching and a strong interest in student research. Salary commensurate with experience. Minority applicants strongly encouraged to apply. An Equal Opportunity/Affirmative Action Employer. Send letter of interest and résumé by 22 November 1988 to: Dr. Kathleen Fleiszar, Department of Biology, Kennesaw State College, Marietta, GA 30061.

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Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level, available 16 August 1989. Ph.D. and minimum of 2 years of postdoctoral experience are required. Special consideration is given to candidates who are studying the regulation of cellular metabolism using contemporary molecular tech-niques. The successful applicant will be expected to participate enthusiastically and effectively in teaching undergraduate and graduate students, and to establish a strong, independent research program. Please submit curriculum vitae, a brief description of current and future research interests, and the names and telephone numbers of three individuals who are willing to provide letters of evaluation to: Dr. Richard P. Sutter, P.O. Box 6057, Biology Department, West Virginia University, Mor-gantown, WV 26506, Applications must be received by 3 February 1989. WVU is an Equal Opportunity Employer. We encourage applications from women and minority group members.

ASSISTANT PROFESSOR IN COGNITIVE PSYCHOLOGY: Possible tenure-track position for fall 1989. Background could include training in general cognition, social cognition, and/or developmental cognition. Special interests might include psycholinguistics, problem solving, development of abstract abilities, or learning disabilities. The candidate should have background and interests with potential for cross-disciplinary applications such as linguistics, education, and sociology. Possibility exists for joint appointment with counseling center or Educational Enhancement Program. In addition to teaching his/her area of interest, candidates must be willing to teach statistics and participate in an interdis-ciplinary social science core course, freshman seminars and/or writing across the curriculum program. Ph.D. and/or writing across the curriculum program. Ph.D. required, some teaching experience helpful. Salary com-petitive. Send letter of application describing interests and experience, curriculum vitae, and three letters of recommendation to: J. Alexander Dale, Department of Psychology, Allegheny College, Meadville, PA 16335. Process will remain open until the position is filled or withdrawn. Women and minorities are encouraged to apply. An Equal Opportunity Employer.

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Responsibilities: Graduate and undergraduate teaching in microbiology/molecular biology, establishment of a productive independent research program, and academic responsibilities normally associated with a tenuretrack faculty position.

Starting date: 1 August 1989.

Applicants should submit a letter of interest accompanied by curriculum vitae, a description of the applicant's research program and career objectives, and the names, addresses, and telephone numbers of three individuals who can evaluate the applicant's qualifications for the position. Applications from women and minorities are especialy invited. All material should be sent to: Dr. Stuart Riggsby, Chairman, Search Committee, Department of Microbiology, University of Tennessee, Knoxville, TN 37996–0845. Nominations should be made as soon as possible; evaluation of applications will begin in January 1989. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504 employer.

ASSISTANT PROFESSOR: The Department of Neurology at the Medical College of Virginia, Virginia Commonwealth University, has a research position available to study the neurobiological mechanisms of seizure disorders and brain ischemia. Experience in calciumregulated enzyme systems, such as protein kinase c, and in enhanced video imaging preferred. Ph.D. and/or M.D. degree required. Send curriculum vitae to: Dr. R. J. DeLorenzo, Professor and Chairman of Neurology, Medical College of Virginia, Box 599, MCV Station, Richmond, VA 23298–0599. Virginia Commonwealth University is committed to increasing representation of women and minority groups on its faculty and is an Equal Opportunity/ Afirmative Action Employer.

Department of Ophthalmology and Visual Science: Full-time academic appointment ASSISTANT PRO-FESSOR level. Ph.D. or M.D. Independent investigator who wishes to address basic cell functions of the retinal pigment epithelium. Joint appointment with basic science department. Send curriculum vitae and bibliography along with statement of your research interests to: Chairman, Search Committee, Department of Ophthalmology and Visual Science, Yale University School of Medicine, P.O. Box 3333, New Haven, CT 06510. Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR IN PSYCHOPHAR-MACOLOGY: Possible tenure-track position for fall 1989. Candidates should have interests in behavioral and/or clinical psychopharmacology and should be capable of encouraging undergraduate research, be willing to teach statistics, and should be able to participate in interdisciplinary social science core courses, freshman seminars, and/or writing across the curriculum program. Specialization in either mental retardation, aging, behavioral therapy, operant conditioning would be helpful. Ph.D. required, some teaching experience helpful. Salary competitive. Send letter of application describing interests and experience, curriculum vitae, and three letters of recommendation to: Jeffrey Cross, Department of Psychology, Allegheny College, Meadville, PA 16335. Process will remain open until the position is filled or withdrawn. Women and minorities are encouraged to apply. An Equal Opportunity Employer.

ASSISTANT PROFESSOR OF PHARMA-COLOGY—Applications are invited for a tenure-track position in pharmacology. Responsibilities include undergraduate teaching and development of an externally funded research program. Experience in autonomic and/ or cardiovascular pharmacology of special interest. Undergraduate degree in pharmacology also desirable. Starting date is negotiable. Interested applicants should submit curriculum vitae and names of three references by 18 November 1988 to: J. Mark Winston, Ph.D., College of Pharmacy and Health Sciences, Drake University, 2507 University Avenue, Des Moines, IA 50311. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF INTERNAL MEDICINE—The University of California, Davis (UCD), School of Medicine, is recruiting for a full-time faculty position at the assistant professor level in the Division of Clinical Nutrition, Department of Internal Medicine. Candidates must be Board-eligible or certified in internal medicine and eligible for licensure in California, as well as have a background in clinical nutrition. Duties include inpatient consultations and outpatient care at UCD Medical Center, Sacramento, and the UCD Campus; teaching medical students, house officers, and fellows; and development of independent basic or clinical research projects. Research program development will be supported in part by a NIH-Clinical Nutrition Research Unit. Applicants should submit curriculum vitae and names of three referees to: Charles H. Halsted, M.D., Professor of Internal Medicine and Chief, Division of Clinical Nutrition, University of California, School of Medicine TB-156, Davis, CA 295016. Closing date for

applications is 31 December 1988. The University of California is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF PHARMACOL-OGY, teaching position at Southeastern College of Osteopathic Medicine (SECOM), joint appointment in new Southeastern College of Pharmacy.

Full-time, starting immediately. Must have doctoral degree and broad teaching experience. Salary range mid-30's. Submit curriculum vitae and three references: Patrick E. Bentley, D.O., Ph.D., Chairman, Department of Pharmacology, SECOM, 1750 N.E. 168th Street, North Miami Beach, FL 33162; telephone: 305-949-4000.

ASSISTANT PROFESSOR PROKARYOTIC MOLECULAR BIOLOGY

Applications are invited for a tenure-track position at the level of assistant professor in the Department of Microbiology, University of Pennsylvania School of Medicine, to commence in January 1990. Applicants should have an established research interest in the area of prokaryotic molecular genetics, gene regulation, cell biology, or molecular mechanisms of pathogenesis. Candidates should have at least 2 years of postdoctoral experience and are expected to demonstrate the potential to develop a strong, independently funded research program. Teaching responsibilities include lecturing in the area of prokaryotic molecular genetics at the graduate level and participation in a team-taught microbiology course for medical students. Send curriculum vitae, names of at least three references, and a description of past research accomplishments and future plans to: Dr. Philip Youngman, Department of Microbiology, University of Pennsylvania School of Medicine, Phila Palelphia, PA 19104. Application deadline 31 January 1989. An Equal Opportunity Affirmative Action Employer.

ASSISTANT PROFESSOR POSITIONS DUKE UNIVERSITY MEDICAL CENTER SECTION OF CELL GROWTH, REGULATION, AND ONCOGENESIS DUKE COMPREHENSIVE CANCER CENTER

Duke University Comprehensive Cancer Center invites applications for tenure-track positions in a new Section of Cell Growth, Regulation, and Oncogenesis at the level of assistant professor. Investigators working at the molecular level in any area of cancer biology are encouraged to apply, but special consideration will be given to those working in the areas of growth and differentiation factors, signal transduction, molecular basis of oncogene action include recessive oncogenes and multiple drug resistance. Applicants with postdoctoral experience should have demonstrated high potential for imaginative substantial independent research. Successful candidates will also be appointed into a basic science department within the Medical Center.

Applicants should send curriculum vitae, and a brief description of present and proposed research to: Dr. Robert M. Bell, Head, Section of Cell Growth, Regulation and Oncogenesis, Duke Comprehensive Cancer Center, Box 3814, Durham, NC 27710. Applicants should arrange for three or more letters of recommendations to be forwarded to the same address.

To be assured of full consideration, application should be received by 5 December 1988.

Duke University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

The College of Arts and Sciences of Widener University invites applications for an anticipated tenure-track position as **ASSISTANT PROFESSOR OF BIOLO-GY** beginning 1 September 1989. Ph.D. is required. Teaching responsibilities will include an introductory course in microbiology for students in the School of Hotel and Restaurant Management and other undergraduate biology courses offered by the College of Arts and Sciences. Letter of application, complete curriculum vitae, and three letters of recommendation should be sent to: **Robert Morris, Biology Department, Widener University, Chester, PA 19013.**

ASSISTANT PROFESSOR—PSYCHOLOGY

The Department of Psychology of the American University invites applications for a tenure-track position at the assistant professor level in neuropsychology—clinical neuropsychology or experimental neuropsychology (huiman or animal), beginning in the fall of 1989. Persons with interests such as neuropsychological dysfunction, brain mechanisms in cognitive function, learning and memory, or developmental neurobiology are encouraged to apply.

Responsibilities include teaching and advising undergraduate and graduate students (in experimental and APA clinical doctoral programs and general master's programs), supervising student research, scholarship and university service. Qualifications: Ph.D. and evidence of strong scholarship and research promise. Position subject to final budgetary approval. Send curriculum vitae, letter describing research and teaching experience, and names of three references by 1 February 1989 to: Chair, Neuropsychologist Search Committee, Department of Psychology, The American University, Washington, DC 20016. The American University is an Equal Employment Opportunity/Affirmative Action University; minority and women candidates are encouraged to apply.

ASSISTANT PROFESSORSHIP BIOSTRUCTURAL CHEMISTRY PRINCETON UNIVERSITY

As part of an expansion in the life sciences at Princeton University, the Department of Chemistry invites applications for an assistant professorship from individuals whose work emphasizes the structure and function of biologically important macromolecules (proteins, nucleic acids, polysaccharides, phospholipids). More senior appointments could be considered in appropriate cases. Application should include a description of research interests, curriculum vitae, and three letters of recommendation, and should be sent by 30 November 1988 to: Professor Robert A. Pascal, Jr., Department of Chemistry, Frick Laboratory, Princeton University, Princeton, NJ 08544. Princeton University is an Equal Opportunity/Affirmative Action Employer.

Arizona State University (ASU), West Campus, invites applications for two tenure-track positions in the Life Sciences Program. (i) ASSISTANT PROFESSOR: ecologist: specialty in field studies in the Southwest; (ii) ASSOCIATE/FULL PROFESSOR: biologist: discipline open, interest in developing undergraduate human biology program. Postdoctoral experience desirable. Successful candidates will have exceptional research background showing promise of fundability, and strong teaching ability. Must have high interest in building the Life Sciences Program at new campus. Send curriculum vitae, application letter, selected research articles, and three letters of reference by 15 December 1988 to: Dr. L. L. Stryker, Search Committee, ASU West, 4701 West Thunderbird Road, Phoenix, AZ 85069. Telephone: 602-543-6000. ASU is an Equal Opportunity/ Alfirmative Action Employer.

ASSISTANT RESEARCH PROFESSOR

Available immediately to conduct research and participate in teaching molecular immunology. Candidates should have a doctorate in science and two or more years of postdoctoral research experience in the study of molecular and genetic basis of autoimmune diseases. Experience in monoclonal antibody production, RIA, tissue culture, in vitro translation assays, cDNA and genomic DNA cloning procedures, RFLP analysis and DNA sequencing methods essential. Salary will be commensurate with training and experience. Send curriculum vitae and names of three references to: Dr. C. Bona, Department of Microbiology, Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029.

Mathematical Ecologist

Position available in Biology Department for postdoctoral investigator or a tenure-track scientific staff level. Seeking Mathematical Ecologist with research interest complimenting those of diverse department with activities in many areas of biological oceanography. Possible areas of research include: mathematical analysis of areas such as physiological processes; recruitment, population dynamics, and life histories: nonlinear dynamics in marine systems; food web structure and dynamics; coupled physical/biological processes in populations and communities; or multi-scale processes in marine systems. Collaborative research with staff in other institution departments is encouraged.

Send resume with names of three professional references to:



RESEARCH SCIENTIST

A Scientist position is available in our Food and Biochemical Research Department for an Enzymologist Molecular Biochemist to explore the area of gas-molecular biosystems interactions. The research will focus on interferences of different gases with enzymatical systems.

The candidate will have a PhD or MS in Molecular Biology, Biochemistry or Biochemical Engineering with some knowledge of microbiology and microbial physiology. Previous experience with enzyme systems is welcomed. Good communication skills are essential.

AMERICAN AIR LIQUIDE is part of L'Air Liquide Group, a world leader in industrial gases. This position is available at our Chicago Research Center located 15 miles southwest of Chicago. Applicants are invited to submit their resume to: Ronald J. Nowak, Personnel Manager, AMERICAN AIR LIQUIDE, 5230 S. East Avenue, Countryside, Illinois 60525. Affirmative Action/Equal Opportunity Employer

AMERICAN AIR LIQUIDE

BIOCHEMICAL PHARMACOLOGIST POSTDOCTORAL POSITION

Norwich Eaton Pharmaceuticals, Inc., seeks a doctoratelevel scientist to conduct independent research characterizing the interaction of antiarrhythmic agents with cardiac and brain cells. The approach, to be defined by the postdoctoral fellow, may involve, for example, studies of receptor binding, biochemical effects and/or membrane conformation effects.

Consultation with nearby academic laboratories will be encouraged. Research will be conducted in the wellequipped, modern laboratories of Norwich Eaton Pharmaceuticals, Inc., a Procter & Gamble Company, in Norwich, NY. Norwich, a small town in the Binghamton-Syracuse-Utica triangle, features comfortable family living in a four season climate.

The ideal candidate will hold a Ph.D. in biochemistry, pharmacology or molecular biology and will have 0-2 yr. postdoctoral training studying the interaction of small molecules with cells. Experience handling cardiac or brain cells and in performing receptor binding assays would be a plus. Compensation and benefits are competitive and dependent on qualifications. Interested candidates should provide a resume and publication list to:

Nicholas Andrews Personnel Rep Norwich Eaton Pharmaceuticals, Inc. 17 Eaton Avenue, Norwich, New York 13815

RESEARCH SCIENTIST Analytical Chemist

Wyeth-Ayerst Laboratories, a leading pharmaceutical firm in the development and production of prescription drugs, biologicals and nutritionals, has a nutritionally oriented position immediately available for an Analytical Chemist at its Radnor, PA facility.

Candidates must have a Ph.D. with emphasis in analytical biochemistry or nutrition and 5 years relevant experience. Knowledge of analytical instrumentation and HPLC techniques is required along with familiarity with sample preparation from complex biological matrices.

A major responsibility involves assay development in several areas including protein molecular weight determinations, as well as vitamin and lipid analyses. Proven skills in performing and directing assay validation is imperative. Strong verbal and written communication skills would be an asset for heavy interaction with quality assurance groups.

We offer a highly competitive salary, extensive company benefits and professional working environment. Qualified candidates should submit resume with salary history in complete confidence to: **Recruitment Manager**,



Wyeth-Ayerst Laboratories, Position *353, P.O. Box 8299, Philadelphia, PA 19101. An equal opportunity employer, M/F/H/V.

Middlebury College—Applications are solicited for a regular appointment (tenure-track) at the rank of AS-SISTANT PROFESSOR (Ph.D.) or INSTRUCTOR (A.B.D.) from chemists or biochemists with backgrounds and interests in experimental physical, physical/ analytical, or biophysical chemistry. Secondary interest in environmental chemistry would be particularly attractive. Candidates with postdoctoral or brief teaching experience will be given preferential consideration. The successful candidate should be committed to teaching at the undergraduate level and developing a productive research program that will significantly involve undergraduates. Please submit three current letters of reference that speak to experience as a classroom teacher and potential for developing a research program, an up-to-date résumé, graduate and undergraduate transcripts, and a description of research interests to: **R. W. Gleason, Chairman, Department of Chemistry and Biochemistry, Middlebury College, Middlebury, VT 05753.** Application deadline is 15 December 1988. *Middlebury College is an Equal Opportunity Employer*.

ASSISTANT PROFESSORSHIP MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY UNIVERSITY OF COLORADO, BOULDER

We seek candidates with research interests in mechanisms of cell function or communication. Areas of particular interest to the department include, but are not limited to, transmembrane signalling, cell-cell interactions, nuclear-cytoplasmic communication, hormone action, cellular immunology, molecular parasitology, and host-pathogen interactions. Candidates must have demonstrated outstanding research ability and have planned exciting future research. Other selection criteria will include promise of teaching ability and interaction with colleagues. Preference will be given to candidates at the assistant professor level, but candidates at all levels will be considered. Candidates should have a résumé, reprints, an outline of proposed research, and three letters of reference sent to: Search Committee, Department of MCD Biology, Campus Box 347, University of Colorado, Boulder, CO 80309. Applications must be complete by 16 December 1988.

The University of Colorado at Boulder has a strong commitment to diversity. In that spirit, we are particularly interested in applications from women, ethnic minorities, and disabled individuals.

ASSISTANT/ASSOCIATE PROFESSOR. The Department of Microbiology and Immunology of the University of Michigan Medical School seeks an immunobiologist for a tenure-track appointment as assistant/ associate professor. The successful applicant will establish an independent research program applying modern molecular/cell biological approaches to the study of the immune response. The position requires active participation in teaching of graduate and medical students. Salary support, a well-equipped laboratory and start-up funds are available from departmental resources. Send curriculum vitae, a brief statement of research interests and names and addresses of three referees by 30 December 1988 to:

Immunology Search Chairman Department of Microbiology and Immunology The University of Michigan Medical School M6643/0620 Medical Science Building II Ann Arbor, MI 48109–0620

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

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY: A tenure-track position is available in the Department of Biochemistry at the University of Mississippi Medical Center. Candidates with research interests in molecular, cellular or developmental biology are encouraged to apply. The Department of Biochemistry has twelve full-time faculty members, is wellequipped and the areas of research include various aspects of nucleic acid/protein structure, synthesis and functions in diverse experimental systems. Interested applicants should forward curriculum vitae, three letters of recommendation, and a statement of their future research plans to: Dr. Donald B. Sittman, Search Committee, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216–4505. Equal Opportunity Employer, M/F/H/V.

POSITIONS OPEN



ASSISTANT/ASSOCIATE PROFESSOR: Applications are invited for a tenure-track position for a biologist working in fields ranging from cell biology to biochemistry. Applicants must have experience with recombinant DNA methodology to complement the expertise of our research-oriented group in biochemistry/ microbiology. The successful applicant will establish an extramurally funded research program, and supervise Ph.D. students. Teaching assignments will utilize the applicant's expertise primarily at the graduate level. Send statement of research interests, curriculum vitae, and names and telephone numbers of three references by 15 December 1988 to: Professor Wilbur H. Campbell, Search Committee Chair, Department of Biological Sciences, Michigan Technological University, Houghton, MI 49931. Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY. Tenure-track, 12-month position at Indiana University School of Medicine. Qualifications include earned degree in biochemistry, postdoctoral or equivalent research experience and a fundable research program. Academic duties include shared lecture and laboratory responsibilities in the medical biochemistry course. Opportunities for collaborative research are available and encouraged. Send curriculum vitae and three letters of recommendation to: Dr. Walter X. Balcavage, Chairman, Biochemistry Search Committee, Terre Haute Center for Medicine, 135 Holmstedt Hall, Terre Haute, IN 47809. Indiana University is an Affirmative Action/Equal Opportunity Employer.

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

UNIVERSITY OF SOUTH ALABAMA COLLEGE OF MEDICINE ASSOCIATE DEAN—ACADEMIC AFFAIRS

The Associate Dean for Academic Affairs has full responsibility for all aspects of medical student affairs, including curriculum, admissions, minority student affairs, counselling, and guidance for students in obtaining appropriate postgraduate positions. Candidates should have an earned doctorate, a record

Candidates should have an earned doctorate, a record of excellence in teaching/research/administration, proven academic skills, excellent interpersonal skills, and a commitment to academic excellence. The successful candidate must be eligible to hold a tenured position in one of the college's academic programs.

Candidates for the position should submit their curriculum vitae and three letters of reference by 1 January 1989. Applications or nominations should be addressed to:

Jim L. Wilson, M.D., Chairman Associate Dean Search Committee Department of Family Practice 1504 Springhill Avenue Mobile, AL 36604

The University of South Alabama is an Affirmative Action/ Equal Opportunity Educational Institution.

ASSOCIATE RESEARCH SCIENTIST. Study cis sequence and trans-acting protein in regulation of eukaryotic gene transcription. Send curriculum vitae to: Dr. P. Feigelson, Department of Biochemistry, Institute of Cancer Research, Columbia University, 701 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity Employer and welcomes applications from women and minorities.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF LABORATORY ANIMAL PATHOLOGY—Department of Veterinary Pathology, University of California, Davis (UCD). Candidates must have a D.V.M. (or equivalent) and a Ph.D. with advanced training in pathology. Board-certification by the A.C.V.P. is required. Candidates must have special competence in laboratory animal pathology. Persons also certified by the A.C.L.A.M. are encouraged to apply. There should be evidence of productivity in research relating to pathogenesis of diseases of laboratory animals or development of animal models of human disease. The successful candidate will be expected to be competent in the use of techniques necessary for studies at the cellular and molecular level.

The candidate will participate in relevant teaching programs at the professional and postgraduate levels, including service duties for UCD Laboratory Animal Facilities. An important goal will be to establish an independent research program. Rank and salary will be commensurate with qualifications. Starting date is 1 July 1989. Deadline for receipt of applications is 15 December 1988 or until filled.

Applicants should send curriculum vitae and the names of at least three references to: Dr. D. L. Dungworth, Chairman, Department of Veterinary Pathology, University of California, Davis, CA 95616.

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

AUDITORY PSYCHOPHYSICS POSTDOCTORAL POSITION

Position available immediately to study psychophysics of hearing in fishes from a comparative perspective. Opportunities exist to collaborate in other ongoing neurobiological projects. The individual selected will work jointly with the laboratories of **Dr. Arthur N. Popper** (Zoology) and **Dr. Robert Dooling** (Psychology). A Ph.D. in zoology, psychology, neurobiology or related areas is required. Experience in auditory physiology, neuroanatomy or psychophysics is highly desirable. The position is currently funded until mid-1990. Send curriculum vitae, statement of research interest, and names of three references to: **Dr. Arthur N. Popper, Department of Zoology, University of Maryland, College Park, MD 20742.** The University of Maryland is an Equal Opportunity/Affirmative Action Employer.

BEHAVIORAL ECOLOGIST—Tenure-track position open in fall 1989, for assistant or associate professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in ecologically oriented animal behavior. The successful candidate will strengthen our graduate program in behavior and complement current faculty interests in ecology, evolutionary biology, or physiology. Preference given to those conducting experimental, field-based research and those using quantitative modeling techniques. Postdoctoral experience preferred. Teaching responsibilities include courses in animal behavior. Send curriculum vitae, four letters of recommendation, representative reprints, and description of research interests by 15 December 1988 to: Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019. An Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY FACULTY POSITION— Temple University School of Medicine—Applications are invited for a tenure-track position at the assistant professor to full professor level starting after 1 July 1989. Rank and salary will be commensurate with experience. The department seeks an outstanding scientist who is using techniques of molecular biology and/or physical biochemistry to study the mechanism of enzyme action. This person will be required to contribute to the department's teaching program for medical, dental and graduate students in areas of enzyme of regulation of metabolism and to develop a strong, externally funded research program. The Department is well equipped and all members are engaged in funded research projects. Applicants should submit before 1 December 1988 (i) curriculum vitae, (ii) a brief statement of research interests and plans, (iii) title pages with abstracts of recent publications, and (iv) the names and addresses of three references to: Dr. J. Kenneth Hoober, Chair, Search Committee, Department of Biochemistry, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. Temple University is an Equal Opportunity/Affirmative Action Employer.

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FELLOWSHIPS IN THEORETICAL NEUROBIOLOGY

The Neurosciences Institute invites applications for positions as Institute Fellows in Theoretical Neurobiology. Institute Fellows receive a stipend and are usually appointed for a period of two years with discretionary renewal for up to an additional two years.

The Institute is an independent organization located on the campus of The Rockefeller University in New York City. In addition to serving as the home of the Neurosciences Research Program, the Institute is a center of study and research for distinguished visiting neuroscientists. The Institute also supports a program of research in theoretical neurobiology which seeks to develop detailed simulations of neural function that are biologically based and experimentally testable. Current projects include the construction of categorization automata, analysis of synaptic modification mechanisms, and detailed simulations of various cortical and subcortical regions.

Applicants should be at the postdoctoral or assistant professor level. A background in experimental or theoretical neuroscience or related fields is required; training in physics or mathematics will be viewed with favor. Applicants should also have some computer expertise.

Address applications to Dr. W. Einar Gall, Research Director, The Neurosciences Institute, 1230 York Avenue, New York NY 10021. Include a short statement of interests, a curriculum vitae, and the names of three references.



The Neurosciences Institute of the Neurosciences Research Program PENNSTATE

University Park Campus

PLANT DEVELOPMENTAL BIOLOGISTS DEPARTMENT OF BIOLOGY

We are seeking applications for two tenure-track positions, at the Assistant or Associate Professor level, in areas of experimental plant development. Successful candidates will be expected to establish a vigorous research program employing molecular, physiological, cytological or genetic techniques and to participate in undergraduate and graduate education. Applicants should demonstrate significant postdoctoral research accomplishments and the ability to use innovative approaches and techniques in their research. We are especially interested in individuals who are applying molecular, genetic and biophysical techniques to mechanistic questions in plant development and who have a strong background in plant structure. Excellent research facilities and start-up support are available, as well as possibilities for collaboration with other Penn State faculty.

Please send curriculum vitae, a brief statement of current and future research directions, a statement of teaching interests, and three letters of reference by January 15, 1989, to: Daniel Cosgrove, Search Committee, Department of Biology, 208 Mueller Laboratory, Penn State University, University Park, PA 16802. Phone (814) 863-3892.

RESEARCH

MICROBIOLOGIST

Due to the continued growth and expansion of Marion Laboratories, Inc., a position is currently available in our Analytical Department for a Research Microbiologist.

Primary responsibilities are to support the research and development efforts in the areas of product development,

We require a Master's degree in the biological sciences

with at least three years experience in a microbiology labora-tory or a Ph.D. in the the biological sciences. Experience in one or more of the following areas is desirable: bacterial identification, antimicrobial susceptibility testing, mutagenicity

testing, tissue culture, sterility testing, pyrogen testing, sterili-

Strong human relation skills and the ability to effectively interface with all levels of management are absolutely necessary. This individual must also possess superior oral and

Marion offers an excellent total compensation and benefits

Marion offers an excellent total compensation and benefits program including bonus, stock options, profit sharing, com-prehensive group health, dental and life insurance benefits. Oualified candidates should submit a detailed resume includ-ing salary history to: Recruiting and Placement, Dept. SRK, 10236 Marion Park Drive, Kansas City, MO 64137. Equal

Laboratories. Inc.

zation validation procedures, or statistical analysis.

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he primary function will be to study the molecular mechanisms of immunodeficiency virus (HIV) infections using molecular biology techniques.

Post-Doctoral Fellow/ **Research Associate**

The qualifications we seek for this role include a Ph.D. or the equivalent in molecular biology, microbiology or biochemistry, with experience in tissue culture, cloning and gene sequencing preferred.

This position is immediately available with funding support provided for a minimum of 2 years. We invite qualified candidates to respond by submitting a curriculum vitae as well as two references, quoting reference number C128, to: Dr. A.S. Lau/B.R.G. Williams, Division of Infectious Diseases, Hospital for Sick Children, University of Toronto, 555 University Avenue, Toronto, Ontario, Canada, M5G 1X8



BIOCHEMIST—DUKE UNIVERSITY MEDICAL CENTER

The Connective Tissue Laboratory of the Department of Medicine is seeking Ph.D. or M.D. 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 and molecular biology is preferred. Send résuné and names of three references to: Sheldon R. Pinnell, M.D. and Richard Wenstrup, M.D.—Department of Medicine, Box 3135, Duke University Medical Center, Durham, NC 27710. Equal Opportunity Employer.

BIOCHEMIST

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

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

An Equal Opportunity Employer.

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

BIOLOGY FACULTY

The Biology Department of George Mason University is seeking applicants for two or three tenure-track positions, contingent upon funding, to begin 1 September 1989.

APPLIED ECOLOGIST. Applicants with research interests in the management of natural ecosystems or the fate and effects of environmental pollutants are preferred. Teaching responsibilities will likely consist of a course in the applicant's specialty, general ecology and introductory biology. Duties will include supervision of doctoral students in the Ph.D. program in Environmental Biology–Public Policy. COMPARATIVE PHYSIOLOGIST. Teaching re-

COMPARATIVE PHYSIOLOGIST. Teaching responsibilities will include undergraduate and graduate courses in physiology and participation in the department core course in animal biology. Applicants with invertebrate research interests and who are capable of contributing to the Ph.D. program in Environmental Biology–Public Policy are preferred. MOLECULAR BIOLOGIST. Applications are cought from individual using techniques of molecular

MÖLECULAR BIOLOGIST. Applications are sought from individual using techniques of molecular biology to study gene function and regulation. Teaching responsibilities include a graduate course in molecular genetics and a graduate laboratory course in molecular biology. Postdoctoral experience preferred.

biology. Postdoctoral experience preferred. The anticipated rank of all three positions is at the assistant professor level. The successful candidate will be expected to develop a vigorous, externally funded research program. Candidates must have a Ph.D. by 1 September 1989. Send curriculum vitae, a statement of research interests, and names of three references by 1 January 1989 to: Chairperson, (state which position) Search Committee, Department of Biology, George Mason University, Fairfax, VA 22030. George Mason is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITION IN MOLECULAR NEUROBIOLOGY UNIVERSITY OF WISCONSIN-MADISON

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

Indiana University, Bloomington—Biochemistry. The Department of Chemistry at Indiana University, Bloomington, invites applications from **BIOCHEMISTS** for anticipated tenure-track faculty positions at the junior and senior level. The department is seeking the strongest individuals it can find, preferably with interests in structure-function relationships of proteins, enzyme reaction mechanisms, signal transduction, neurochemistry, membrane structure and assembly, protein-nucleic acid interactions, or physical biochemistry. Applicants at the senior faculty level must have achieved a position of leadership in their field of research while applicants at the assistant professor level must show exceptional promise of establishing a vigorous independent research program in an academic setting. To apply, submit curriculum vitae, publication list, names of references, and a short résumé of ideas for the development of research programs. Candidates at the junior level should arrange to have three letters of recommendation forwarded as well. Deadline for applications is 1 December 1988. Please apply to:

Paul A. Grieco, Chairman Department of Chemistry Indiana University Bloomington, IN 47401

Indiana University is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY: ASSISTANT PROFESSORSHIP, tenure-track, available fall 1989, for a candidate with a broad biological background and a specialty in zoology. The successful candidate must have a Ph.D. and no more than 5 years of teaching experience. Responsibilities will include one semester of general biology which covers diversity and physiology of living organisms, two upper division courses in a specialty such as endocrinology, immunology, mammalogy or evolution, and possible participation in an interdisciplinary course.

Undergraduate teaching is the highest priority; research, preferably involving undergraduates, and scholarly achievement are expected as are advising students and serving on committees. Experience in a small college setting is desirable.

Ursinus College is 30 miles northwest of Philadelphia in a suburban setting and is a highly selective, residential, co-ed, liberal arts college with 1200 students and a long tradition of academic excellence.

Send letter of application, curriculum vitae, and names, addresses and telephone numbers of three references to: Dr. Peter F. Small, Biology Department, Ursinus College, Collegeville, PA 19426, by 1 January 1989.

Ursinus College does not discriminate on grounds of race, color, national origin, sex, age or handicap.

BIOPHYSICIST—responsible for synthesizing peptides for R&D. Ph.D. in biophysics and 1 year of experience as molecular biophysicist required. Experience must include synthesizing and designing peptides. \$30,000 per year. Submit résumé to: Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123. Refer to #4208521.

POSITIONS OPEN

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

Three faculty positions are available in the Department of Biochemistry at the level of **ASSISTANT OR ASSO**-**CIATE PROFESSOR** for well-trained or experienced candidates in biochemistry and molecular biology. The Department expects to fill these positions in 1989. Successful applicants will be expected to develop and 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 potential research projects to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208.

UNIVERSITY OF CALIFORNIA LOS ANGELES (UCLA) SCHOOL OF MEDICINE BIOLOGICAL CHEMISTRY

The Department of Biological Chemistry is recruiting at the level of **ASSISTANT PROFESSOR** (tenure-track) for 1989 or 1990. We are seeking outstanding candidates with research interests in any modern area of molecular, cellular, or developmental biochemistry. Applicants should submit curriculum vitae, a one-page summary of research plans, and names of three references to:

Dr. James Paulson Chair, Search Committee Department of Biological Chemistry UCLA School of Medicine Los Angeles, CA 90024–1737

The University of California is an Equal Opportunity Employer; applications from women and members of minority groups are encouraged.

BIOLOGIST: The Biology Department of William Jewell College invites applications for a tenure-track assistant/associate professorship in biology beginning fall 1989. The candidate should have a Ph.D. in physiology with postdoctoral experience preferred. Address letters of application by 21 November 1988 to: Dr. Judith A. Dilts, Chair, Department of Biology, William Jewell College, Liberty, MO 64068. Telephone: 816-781-7700, X5661. William Jewell is an Affirmative Action/Equal Opportunity Employer and specifically encourages applications from minorities and women.

PENN STATE BIOLOGY FACULTY POSITIONS

The Department of Biology, The Pennsylvania State University Commonwealth Educational System, invites applications for two tenure-track positions available August 1989. Hazleton Campus, Hazleton, Pennsylvania. Duties include teaching general biology and basic human anatomy, physiology, and microbiology for allied health majors. Ogontz Campus, Abington, Pennsylvania. Botanist. Position requires teaching general biology and introductory courses in botany and cell biology. 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 December 1988 or until suitable applicants are found. Separate application materials are required for each position. Send curriculum vitae, transcripts, and three letters of reference to: Dr. William Neff, Box G, 208 Mueller Laboratory, University Park, PA 16802.

An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.

BOTANY. Marlboro College, recipient of a Howard Hughes grant to promote science education, invites applications for a tenure-track ASSISTANT PROFES-SOR position beginning between 1 June and 1 September 1989. Broadly trained plant scientist with environmental emphasis sought to join seven person natural science department. Additional experience in physical geography, geology, climatology, or forestry preferred. Primary responsibility to teach undergraduates, including directing senior research projects. Ph.D. required. *Women and minorities encouraged to apply*. Send curriculum vitae, letters of reference by 10 January 1989, to: Dr. John W. Hayes, Dean of Faculty, Marlboro College, Marlboro, VT 05344. Equal Opportunity Employer.

REGENERON

NEUROBIOLOGISTS

MOLECULAR BIOLOGISTS

Regeneron, a newly formed molecular neurobiology corporation, has openings for highly qualified, innovative individuals to serve as staff scientists, postdoctoral fellows, and technical research associates in Neurobiology and in Molecular and Cell Biology. Regeneron was organized by a team of preeminent neurobiologists, molecular biologists, biochemists and neurologists. We are committed to study the control of neuronal growth and regeneration and to develop novel therapeutic approaches to nerve degeneration resulting from disease, traumatic injury, or aging. **Regeneron** is well positioned, scientifically and financially, to mount a focused attack on these major health problems.

Positions in **Neurobiology** require expertise in any of the following areas:

- Neuronal Cell Culture
 Animal Models
 Neurotrophic Factors
 Histology
- Neuropharmacology
 Extracellular Matrix

Positions in **Molecular and Cell Biology** require skills in the areas of:

- Molecular Cloning
 Gene Expression
 Protein Biochemistry
 Receptors
- Monoclonal Antibodies
 Transgenics

Regeneron's modern, well-equipped laboratory facility is located on a 200-acre wooded campus in Westchester County, about 20 miles north of New York City, near a number of major universities and medical centers. Close interactions with the Company's Scientific Advisors and other colleagues at academic institutions foster an exceptionally productive intellectual environment.

Regeneron offers excellent benefit and compensation packages, including stock ownership. Suburban Westchester features attractive and affordable housing, outstanding public schools and recreational facilities, and ready access to the cultural and business centers of New York.

Please send your resume, in confidence, to:

Ms. Carol Deaken, **Regeneron** Suite 12 M, 1320 York Avenue New York, NY 10021

Regeneron is an equal opportunity employer.

DIRECTOR, NEUROTOXICOLOGY DIVISION

The U.S. Environmental Protection Agency (EPA) is seeking candidates for the position of Director, Neurotoxicology Division (NTD). This position is located in the Health Effects Research Laboratory (HERL), Research Triangle Park, NC. This is a permanent full-time position with a salary range of \$54,907 to \$71,377 per annum commensurate with qualifications.

HERL has a staff of about 325, over 100 of whom hold doctoral level degrees. The Laboratory has a diverse program which includes *in vitro*, animal, human clinical, and epidemiological research designed to address issues related to the health effects of air and water chemical and biological pollutants.

THE NTD is a multidisciplinary program organized into three branches: Behavioral Toxicology, Neurophysiology and Systems Engineering with a combined staff of 33. The Division is a focal point for planning, conducting, coordinating, supporting and evaluating a program aimed at studying the effects of chemical and/or physical agents on nervous system funcitons. The program includes both intramural investigations and extramural arrangements with universities, industry, private research institutions and other government agencies. The primary responsibilities of the Director are to direct and manage the program. This includes developing the program to meet the evolving needs of EPA, presenting the program, developing and managing budgets, supervising the staff, directing the progress of the program, and ensuring the scientific quality and productivity of the program.

Qualifications for the position include:

- Bachelor's degree in Pharmacology, Toxicology, Psychology, Physiology or Biology with a minimum of six years of professional research experience in any of these areas. Applicable graduate coursework may be substituted for a portion of the required experience. This required education and experience must include a substantial background in neurotoxicology.
- 2. Experience in developing and managing budgets.
- 3. Experience as supervisor of a scientific/professional staff.
- Applicants must have recognized scientific expertise as evidenced by multiple publications in peer-reviewed literature and invitations to participate in national and international meetings/panels.
- 5. Proven ability to provide leadership in directing the development and progress of a creative and effective research program in neurotoxicology.
- 6. U.S. Citizenship is required.

Forward curriculum vitae and names of three references prior to November 18, 1988 to:

Dr. Lawrence W. Reiter c/o Terri Burrell, HRMD (MD-29) U.S. Environmental Protection Agency Research Triangle Park, NC 27711

AN EQUAL OPPORTUNITY EMPLOYER

CANCER RESEARCH

ONCOLOGIST, Ph.D. Three years of postdoctoral experience. To conduct research as an independent investigator of chemical carcinogenesis, including application of techniques of molecular biology to liver tumor promotion. Candidates must have expertise in the investigation of metabolism and detoxification of chemical carcinogens. Appointment as research instructor or research assistant professor. Salary commensurate with qualifications. Interested persons should send their curriculum vitae and the names of three references to: Oncology Search, Department of Anatomy and Cell Biology, Box 439, Health Sciences Center, University of Virginia, Charlottesville, VA 22908. An Affirmative Action/ Equal Opportunity Employer.

CELL BIOLOGIST—Tenure-track position in fall 1989, for assistant or associate professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in cell biology working at the level of the cell membrane. The successful candidate will have an interest in receptors, membrane-cytoskeletal interactions, transduction of signals, or a similar area. Postdoctoral experience is preferred. Teaching responsbilities include courses in cell biology. Send curriculum vitae, four letters of recommendation, representative reprints, and description of research interests by 15 January 1989 to: Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019. An Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGIST AT THE UNIVERSITY OF TEXAS AT AUSTIN

The Department of Botany at The University of Texas at Austin invites applications for a tenure-track faculty position at the assistant professor level. We seek an individual who will establish a strong research program addressing contemporary problems in plant cell biology and who will contribute to teaching both at the undergraduate and graduate level. Submit curriculum vitae (including selected reprints), names of three references, and a statement of research plans and objectives to: **R. Malcolm Brown, Jr., Chairman, Search Committee, Department of Botany, The University of Texas, Austin, TX 78712.** The deadline for receipt of applications is 18 November 1988. The University of Texas at Austin is an Affirmative Action/Equal Opportunity Employer.

CELL-MOLECULAR BIOLOGIST

Applications are being accepted for an anticipated tenure-track position, starting August 1989, in cell and molecular biology with emphasis in developmental genetics. The successful candidate must demonstrate potential for establishing an extramurally funded research program and should complement departmental strengths in cell, development or genetics programs. Establishment of an active graduate program and participation in upper level cell/tissue instruction is expected. Candidates must have a Ph.D. and postdoctoral experience is preferred. Salary commensurate with qualifications and experience. Curriculum vitae, selected reprints, statements of research and teaching interest, and names of three references should be forwarded to: Chairman, Cell Biology Search Committee, Department of Zoology and Physiology, Louisiana State University, Baton Rouge, LA 70803–1725 (Telephone: 504-388-1132 BITNET: ZOOPHYS @ LSUVM). Preference will be given to applications received by 15 January 1989. LSU is an Equal Opportunity/Affirmative Action Employer.

CHAIR, CANCER RESEARCH IN MEDICAL ONCOLOGY

The Ohio State University seeks M.D., Ph.D., or M.D./Ph.D. for Leonard and Charlotte Immke Chair for Cancer Research in Medical Oncology for the new Arthur G. James Cancer Hospital and Research Institute. M.D. candidates should be Board-certified in internal medicine and Board-eligible in oncology with experience in clinical and laboratory investigations as applied to cancer therapeutics from molecular biology viewpoint. Academic full professor position in Department of Internal Medicine. Send curriculum vitae, summary of rescarch, and references to: Immke Search Committee, **410 West Tenth Avenue, N-1017 DN, Columbus, OH 43210.** Search Committee will begin to review applications 1 December 1988. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CELLULAR NEUROPHYSIOLOGIST

The Department of Physiology invites applications for a tenure-track position at the assistant professor level. Preference will be given to individuals using biophysical and molecular approaches to study synaptic physiology and membrane excitability. The successful candidate will be expected to develop an independent research program and to participate in the teaching of medical and graduate students. The department will provide ample start-up funds, laboratory space, and access to our staffed electronics and machine shops. Extensive opportunities exist for interactions with other neuroscientists within the department and in the campus-wide Center for Neuroscience. Applicants should have a Ph.D. and/or M.D. and postdoctoral experience. Send curriculum vitae, summav of research interests, and names of three references to: Daniel J. Simons, Ph.D., Chairman, Physiology Search Committee, Department of Physiology, Uni-versity of Pittsburgh School of Medicine, Pittsburgh, PA 15261. The University is an Equal Opportunity/Affirmative Action Employer.

CHAIRMAN/CHAIRWOMAN DEPARTMENT OF BIOLOGICAL SCIENCES FLORIDA ATLANTIC UNIVERSITY

The Florida Atlantic University Department of Biological Sciences invites nominations and applications for the position of Department Chairman/Chairwoman. Candidates should have a distinguished record of achievement in research, a commitment to excellence in teaching, demonstrated skills in administration, and an interest in leading a department of 16 faculty members through the development of a Ph.D. program. The department currently offers baccalaureate- and master'slevel degrees. The successful application will be expected to maintain an active research program and teach at both the graduate and undergraduate levels.

the graduate and undergraduate levels. Nominations, inquiries, and applications (to include curriculum vitae, a description of research activities and administrative experience, and the names of three references) should be sent to: Dr. Sheldon Dobkin, Chairman, Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL 33431. Applications should be received by 15 January 1989.

Florida Atlantic University is an Affirmative Action/Equal Opportunity Employer.

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

CHEMISTRY

The College of Staten Island of the City University of New York has a tenure-track position for a **POLYMER CHEMIST OR A PHYSICAL CHEMIST** interested in participating in the university's Ph.D. program in polymer chemistry or biochemistry. Preference will be given to candidates in the area of biopolymers, inorganic polymers, or physical chemistry of polymer chains. The successful candidate is expected to teach in the college's undergraduate chemistry curriculum, especially in physical chemistry and general chemistry. The candidate should be interested in actively pursuing outside grant support. Rank is open with salaries beginning at \$27,000 for assistant professor and up to \$65,000 for professor. Facilities for research include newly acquired instruments for FTNMR (solid-state, 200-MHz and 400-MHz), FTIR, thermal analysis, GPC, HPLC, osmometry. To start 1 September 1989. The College is a 4-year senior college in the City University and is scheduled to move to a new 200-acre campus in 1992. Send curriculum vitae and names of three references by 31 January 1989 to: **Professor Fred Naider, Chairperson, Department** of **Chemistry, The College of Staten Island/CUNY, 130 Stuyvesant Place, Staten Island, NY 10301**.

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF SMALL ANIMAL CLINICAL SCIENCES COLLEGE OF VETERINARY MEDICINE MICHIGAN STATE UNIVERSITY

Michigan State University invites applications and nominations for the position of chairperson of the Department of Small Animal Clinical Sciences. This diverse 34-member department has strong clinical, teaching, and research progams. A \$45-million building and renovation project is underway. Within the next few years, the department will occupy the new facility, which will provide a unique opportunity for growth and development.

Candidates should possess a D.V.M. degree (or the equivalent), have an excellent record in research and teaching, be sensitive to the demands of clinical service, and have demonstrated ability in providing academic leadership. An advanced degree (M.S., Ph.D.) and Board-certification in a clinical specialty are desirable.

Applicants should submit curriculum vitae including teaching, clinical service, and administrative experience, a statement of research interests, and the name of three references to: Frederik J. Derksen, D.V.M., Ph.D., Chairperson, Small Animal Clinical Science Search Committee, College of Veterinary Medicine, Michigan State University, Al43 Veterinary Clinical Center, East Lansing, MI 48824–1314. Telephone: 517-353-9710. Review of applications will begin 1 January 1989, but applications will be accepted until a suitable candidate is found.

Michigan State University is an Equal Opportunity/Affirmative Action Employer. Applications and nominations of women and/or minority candidates are encouraged.

CHIEF, INFECTIOUS DISEASES BIOTECH-NOLOGY CORE FACILITY.

The Center for Infectious Diseases (CID), Centers for Disease Control (CDC), is seeking a chief for a newly formed facility involved with biological macromolecule structure determination, sequency, and synthesis. This facility will consist of several state-of-the-art instruments, including oligonucleotide and peptide synthesizers, nucleic acid and protein sequencers, amino acid analyzers, and various support/preparative/analysis equipment. The chief will interact and collaborate with other scientists within all components of the Center for Infectious Diseases. We are seeking an individual with a strong commitment to maintaining a laboratory of emerging technologies in these areas. Broad knowledge in nucleic acid and/or protein chemistry and experience supervising such a service facility is desired but not essential. Qualifications preferred include a doctoral degree and at least 2 years of postdoctoral experience in a field related to the above. Salary is negotiable depending upon qualifications.

Further information about the position can be obtained from Dr. Leonard W. Mayer, Chair, CID Core Facility Advisory Committee, Building 1, Room 2226, MS: D11, Centers for Disease Control, 1600 Clifton Road, Atlanta, GA 30333. Interested candidates may send their curriculum vitae and names of three professional references by 31 December 1988 to: CDC, OPM, Attention: Sharlyn Wilkinson, Building 1, Room 1058, MS: D01, 1600 Clifton Road, Atlanta, GA 30333.

CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

DEVELOPMENTAL BIOLOGIST

The Department of Cell Biology and Anatomy at Oregon Health Sciences University invites applications for a tenure-track faculty position at the level of assistant or associate professor. We are looking for an individual with a strong research background in developmental biology or developmental neurobiology, and who is currently using cellular and molecular biological approaches in their work. The applicant will be expected to develop an independent, competitively funded research program, and to participate in the teaching of graduate and medical students. Submit curriculum vitae, selected reprints, and the names of three references by 1 January 1989 to: Dr. Gary Ciment, Department of Cell Biology and Anatomy (L215), School of Medicine, Oregon Health Sciences University, Portland, OR 97201. *Afirmative Action/Equal Opportunity Employer.*



California State University, Long Beach

Dean, School of Natural Sciences

California State University, Long Beach is a large, comprehensive University with a student body of 34,000 and 2,000 full-and part-time faculty, offering 67 baccalaureate and 54 master's degrees in the liberal arts and applied and professional fields. The School of Natural Sciences, which is comprised of the departments of Anatomy and Physiology, Biology, Chemistry and Biochemistry, Geological Sciences, Microbiology and Physics/Astronomy, as well as the Science Education Program and the Center for Environmental Studies, has an enrollment of 2,193 full-time-equivalent students and 202 full-time and parttime faculty.

An earned doctorate and eligibility for faculty appointment in a department of the School are required, as is college or university teaching experience, a record of research or creative activities, and administrative experience. Appointment effective June 1, 1989, or as soon thereafter as possible.

Applications must be received and/or postmarked no later than Monday, November 21, 1988.

Letters of application, nominations, resumes, letters of recommendation, or requests for additional information should be sent to:

> Dr. June Cooper Vice President for Faculty and Staff Relations California State University, Long Beach 1250 Bellflower Boulevard Long Beach, California 90840

An Equal Opportunity Affirmative Action Employer

Molecular Neurobiology



Faculty Positions

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

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

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



Woods Hole, MA 02543 An equal opportunity employer M/F/H/V

<u>Abbott</u> Fermentation Research Runs A Steady Course

Advanced research projects that are well conceived, well funded and well managed are par for the course at Abbott Laboratories. We're a \$4.4 billion world leader with an outstanding reputation for management and technical strengths. Those strengths show through in our Chemical and Agricultural Products Division and the career opportunities we offer.

Microbial Geneticist: Fermentation R&D

We are seeking a PhD with 3-5 years post-doctoral experience in microbial genetics or biochemistry to join a strain development program. Industrial experience with antibiotic-producing microorganisms is preferred. The selected candidate will have strong interpersonal and written communication skills.

Abbott Laboratories is headquartered in an attractive suburban area north of Chicago. We provide an excellent salary and benefits program featuring profit sharing and employee stock retirement plans. For more information, send a resume in confidence to: Charles Murphy, Corporate Placement, Abbott Laboratories, Dept. SCI/11-4, Abbott Park, IL 60064. Abbott Is An Affirmative Action Employer.

ABBOTT LABORATORIES



Quality Health Care Worldwide

COMPUTER INSTRUMENTATION MANAGER/PROGRAMMER

Complex Carbohydrate Research Center (CCRC) of the University of Georgia is seeking a Project Director for Computer Operations. The CCRC, currently with 70 members and 7 faculty, expects to grow in 3 years to about 200 members and 15 faculty. The CCRC has a large number of sophisticated, computer-controlled analytical instruments, 30 computers (microcomputers, workstations, minicomputers, over half of which are on a LAN), and numerous PC-based databases. The computer instrumentation manager/programmer is responsible for the CCRC's computer software and hardware (purchase, installation, instruction, operation, maintenance, as well as design of operating and database programs) and will invent new ways to use computers to further develop carbohydrate science. Position requires general knowledge of analytical instrumentation and chemical/ biochemical science, extensive computer hardware and programming experience (IBM, HP and DEC operating systems), and a demonstrated ability to teach colleagues, collaborate with researchers, and supervise personnel. B.Sc. required, M.Sc. preferred. Salary about \$50,000, commensurate with experience. Application deadline 30 November 1988; position to be filled by 2 January 1989. Apply to: Drs. Peter Albersheim and Alan Darvill, **Co-Directors, Complex Carbohydrate Research Center, P.O. Box 5677, Russell Labs, Athens, GA 30613**. *An Affirmative Action/Equal Employment Opportunity Institution.*

UNIVERSITY OF MINNESOTA DEAN COLLEGE OF VETERINARY MEDICINE

The University of Minnesota is seeking a dean for its College of Veterinary Medicine (CVM). The dean is the chief executive officer of the College and also serves as an assistant director of the Agricultural Experiment Station.

Candidates for this position must be a doctor of veterinary medicine and have a record of accomplishments appropriate for a tenured appointment in the CVM. Desired qualifications include: 5 years of administrative experience; a graduate degree in a relevant discipline; an understanding of the future trends in veterinary medical education, research and practice; and a commitment to the service aspects of veterinary medicine.

This individual should demonstrate administrative ability; possess a strong academic background with demonstrated excellence in teaching and research; have an appreciation of the importance of service; enjoy a national reputation; and display a commitment to excellence. It is particularly important that the individual be able to develop and maintain effective relations with related units within the university, with private and federal research funding agencies, with veterinary professional organizations, and with practicing veterinarians throughout the state. Salary will be commensurate with experience and qualifications.

Closing date for applications, to include letter of interest and curriculum vitae, and/or letters suggesting names of potential candidates, must be received by 6 January 1989, sent to:

Chair, Advisory Search Committee Dean, College of Veterinary Medicine 428 Morrill Hall 100 Church Street SE Minneapolis, MN 55455

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

ENTOMOLOGIST

The Academy of Natural Sciences seeks an outstanding systematic entomologist for the career-track position of assistant curator. Applicants should have a world-wide perspective on the biogeography and evolution of insects. Our top priority is to locate an authority in aquatic entomology. The candidate must have a Ph.D. and is expected to develop a strong, grant-supported research program and to curate the Academy's collections in his/ her taxonomic speciality. This position includes opportunities for adjunct appointment and graduate students at The University of Pennsylvania. Send curriculum vitae, statement of research/career goals, and names of three references by 15 January 1989 to: Dr. Fred Sheldon, Academy of Natural Sciences, 19th and the Parkway, Philadelphia, PA 19103. The Academy of Natural Sciences is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

UCSD SCHOOL OF MEDICINE DEAN FOR ACADEMIC AND SCIENTIFIC AFFAIRS

The University of California, San Diego (UCSD), School of Medicine, is seeking a senior academic scientist of distinction to work closely with the vice chancellor to provide overall administrative responsibility for the conduct of academic and scientific affairs at our institution. Located in La Jolla, California, UCSD is a researchintensive medical school with a strong commitment to teaching: As one of the several senior individuals comprising the Office of the Dean, the Dean for Academic and Scientific Affairs will serve as deputy dean in these areas of interest.

The Dean will be appointed in the appropriate department of his/her academic discipline. Salary and appointment level will be determined by the candidate's qualifications and will be based on UC pay scales. An M.D. or Ph.D. degree is required.

Candidates should forward curriculum vitae and bibliography to:

Gerard N. Burrow, M.D. Vice Chancellor and Dean UCSD School of Medicine M-002

M-002 La Jolla, CA 92093–0602 To be assured of consideration, applications must be

received by 1 January 1989. The University of California is an Equal Opportunity/

Affirmative Action Employer.

ELECTRON MICROSCOPIST/CELL BIOLO-GIST—The Grace Cancer Drug Center of Roswell Park Memorial Institute is seeking a staff member to assume the responsibilities of the electron microscopy unit. These include (a) establishing an independent scientific program in the area of non-erythroid spectrin function and organization and (b) interacting on a collaborative basis with other staff members in research problems related to ultrastructural localization of oncogene products, anticancer drugs and membrane-associated proteins. Applicants should have 1 to 2 years of postdoctoral experience with expertise in various localization strategies, in situ hybridization, protein purification and monoclonal antibodies. Please send résumé to: Dr. Enrico Mihich, Chairman, Grace Cancer Drug Center, Roswell Park Memorial Institute, Elm And Carlton Streets, Buffalo, NY 14263. An Equal Opportunity Employer.

ENVIRONMENTAL SCIENTIST. The Board on Environmental Studies and Toxicology (BEST) of the National Research Council (NRC) is seeking a project manager for a study of opportunities in applied environmental research and a review/evaluation of hazardous materials management in the Bureau of Land Management. Responsibilities include working with committees of experts and providing intellectual overview and guidance for their work. Position requires a Ph.D. or equivalent preferably in environmental science, ecology, environmental toxicology, or a related field. At least 6 to 10 years of professional experience with environmental and/ or natural resources issues, including substantial experience with environmental and natural resources programs, and policy/decision-making processes of relevant federal agencies. Demonstrated ability to understand the utilization of scientific information in decision-making and to integrate data from a wide variety of disciplines is required. The NRC offers a starting salary commensurate with experience and an exceptional benefits package. Please submit curriculum vitae, a recent publication or writing sample, and names of references to: NRC/ BEST/KH HA 354, 2101 Constitution Avenue, N.W., Washington, DC 20418. Equal Opportunity Employer.

ENVIRONMENTAL SCIENTIST 4

Limnologist/aquatic biologist to conduct water quality and ecological studies in freshwater systems. Strong statistical background and good writing skills are essential. Minimum requirements are bachelor's degree in limnology, biology or ecology and 5 years of experience with 1 year in a supervisory capacity. Excellent benefits. Obtain application from: Southwest Florida Water Management District, 2379 Broad Street, Brooksville, FL 34609–6899. Veterans preference is given in accordance with Ch. 295 F.S.

Equal Opportunity Employer/Affirmative Action V/M/F/H

POSITION ANNOUNCEMENT NEUROBIOLOGIST

The Department of Cell and Structural Biology at the University of Illinois, Urbana-Champaign invites applications for a TENURE-TRACK position in NEUROBIOLOGY at the Assistant Professor level in the College of Medicine. The position is available August 21, 1989. Appli-cants should hold the Ph.D. and/or M.D. degree and show exceptional promise in research, which preferably should address cell and molecular issues in neurobiology. Salary will be commensurate with rank and experience. Duties will include participating in the teaching of neuroscience to medical and graduate students. The UIUC offers exceptional and broad-based supporting resources. These include the Biomedical Magnetic Resonance Laboratory, Center for Electron Microscopy, Center for Biotechnology, and Cell Science Center. The UIUC is a National Center for Supercomputing Applications and is home to the Beckman Institute for Advanced Science and Technology. Applicants are requested to send a curriculum vitae, a summary of research interests, and three letters of reference to:

Dr. J. A. Weyhenmeyer Search Committee Chairman

Department of Cell and Structural Biology University of Illinois

505 South Goodwin Avenue Urbana, Illinois 61801

Telephone: (217) 333-6118 In order to ensure full consideration, applications should be received by January 15, 1989. Interviews may be conducted before January 15, 1989, but all applications received by that date will receive full consideration and the final selection will not be made until after that date. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGIST CB RESEARCH INTERNATIONAL CORPORATION

CB Research International Corporation (CBR), a newly formed biotechnology company located in Long Beach, California, is seeking an outstanding Ph.D. level scientist to establish a research program which is directed towards the expression and function of stress-induced proteins in response to extreme environmental conditions. The preferred candidate will have at least two years of postdoctoral experience with a proven record of independent research potential The position requires a background in molecular and cell biology with experience in the identification of gene products by biochemical and immunological techniques.

This position offers an opportunity to work together with many of the leading scientists in the area of molecular genetics, biochemistry and cell biology of the heat shock/stress response with the potential to develop important applications of stress proteins.

Please send two copies of your resume before December 1, 1988 to:

CB Research International 4404 East Pacific Coast Highway Long Beach, CA USA

90804



RESEARCH FELLOW OR SENIOR RESEARCH FELLOW

IN

NUTRITIONAL BIOCHEMISTRY OF CANCER

This appointment is to receive training and pursue research concerned with Nutritional Biochemistry as it relates to Cancer Etiology and Prevention. The appointee will have a Ph.D. in Nutritional Biochemistry, or related research areas of Cell Biology. Alternatively, training in Molecular Biology, with an interest in nutritional regulation of gene expression would be appropriate. The methods involve tumor cell culture, identification of oncogenes and their products in human cancer tissues, and assays for related growth factors.

The post has the potential for becoming a career position at the American Health Foundation.

Please submit resume to:

DR. DAVID P. ROSE AMERICAN HEALTH FOUNDATION 1 DANA ROAD VALHALLA, NY 10595



An equal opportunity employee m/f/h/v

DIRECTOR CARDIOVASCULAR/ PULMONARY RESEARCH INSTITUTE

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

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

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





Professional Positions in Biotechnology

Life Technologies, Inc., a leader in biotechnology applications to research and industry, is currently seeking candidates for openings in these areas:

Molecular Biology Biochemistry Enzymology DNA Diagnostics Immunology

GIBCO and BRL are Life Technologies' leading brands in the field of cell and molecular biology research products and our success in the marketplace has resulted in a number of new professional positions.

Scientists

- Ph.D. in immunology or related field. Proven record of creativity and productivity. Experience in directing a research or development group.
- Ph.D. in biochemistry/molecular biology/molecular virology and 2-4 years post-doctoral training in enzymology or molecular biology.
- •Ph.D. in microbial genetics or physiology and several years post-doctoral experience in a related position.
- •Ph.D. in molecular biology and 2-3 years experience in diagnostic products or genome analysis mapping, sequencing or related area.

Biochemist/Lab Technicians

• B.S. in biochemistry, immunology, biology, chemistry or health sciences; M.S. and/or practical experience required for some positions.

Please send resume or C.V. to:

Richard L. Hotaling, Jr. Personnel Manager, Dept. S **GIBCO/BRL, Life Technologies, Inc.** 8717 Grovemont Circle Gaithersburg, MD 20877 (A suburb of Washington, DC)

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GIBCO

ELECTROPHORESIS PRODUCT DEVELOP-**MENT.** We have an interesting position available for a person with these qualifications: Ph.D. in biochemistry or related field; superior skills in electrophoresis theory and practice; demonstrated writing ability. For immedi-ate consideration, call or send résumé to: Dr. Joe Tehrani, ISCO, INC., P.O. Box 5347, Lincoln, NE 68505. Telephone: 402-464-0231. Equal Opportunity Employer.

ENVIRONMENTAL HEALTH

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

THE UNIVERSITY OF CHICAGO

The Joseph P. Kennedy, Jr., Mental Retardation Research Center and the Department of Pharmacological and Physiological Sciences are recruiting new FACUL-TY with research interests related to the molecular and cellular biology of the nervous system. Applicants should send their curriculum vitae and bibliography, a brief statement of research interests and plans, and the names of three references to:

Dr. Robert L. Perlman, Director Kennedy Mental Retardation Research Center Department of Pediatrics The University of Chicago 5841 South Maryland Avenue, Box 413 Chicago, IL 60637

From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.

Department of Human Genetics, University of Michi-gan is seeking four tenure-track FACULTY over the next 2 to 3 years. Research in the regulation of gene expression with emphasis on molecular genetics of mammalian development, and novel approaches to human gene mapping and the molecular pathology of human genetic diseases, are of particular interest. Send résumé, statement of research interests, and names of three references to: Dr. Myron Levine, Department of Hu-man Genetics, University of Michigan, Ann Arbor, MI 48109-0618. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION: CARDIAC FUNCTION

A research position is available at The Graduate Hospital at the equivalent assistant professor level for an individual with an M.D. or Ph.D. degree and back-ground in the study of cardiac function in health and disease. Candidates are expected to have demonstrated research experience in one or more of the following areas: cardiac function in the intact subject, function of the isolated working heart, or mechanics of isolated cardiac muscle. An ability to interrelate these areas is extremely desirable but not necessary. The candidate will extremely desirable but not necessary. The candidate will have the opportunity to interact with members of the Cardiology Section of the Department of Medicine, which has a strong interest in cardiac function in health and disease as well as a distinguished cardiac catheteriza-tion faculty. In addition, the candidate may interact with members of the Bockus Research Institute, a group of full time accentrate uppeling in the area of cardioace full-time researchers working in the area of cardiovascu-lar function. These interactions may utilize ongoing studies of cardiac function in the intact animal isolated cardiac muscle and single myocytes. Current studies include laser photolysis of caged compounds, patch clamp electrophysiology and fura-II studies of cell calcium metabolism. An academic appointment at the University of Pennsylvania is available for the successful candidate. Apply to: Thomas H. Kreulen, M.D., Chief, Cardiovascular Division or Robert H. Cox, Ph.D., Director, Bockus Research Institute, The Graduate Hospital, One Graduate Plaza, Philadelphia, PA 19146.

POSITIONS OPEN

The Department of Surgery, University of North Carolina School of Medicine, is seeking a full-time FACULTY MEMBER who has completed his/her graduate education in general surgery and who has demonstrated ability as a teacher and clinician. Academic rank is dependent upon qualifications of individual. The successful applicant should have completed fellowship training in surgical oncology. He/she should have a special competence in tumor immunology with the abili-ty to carry out basic and clinical investigations in this field. Interested applicants should forward their curricuheld. Interested applicants should forward their curricu-lum vitae and bibliography to: George F. Sheldon, M.D., Chairman, Department of Surgery, University of North Carolina, 136 Burnett-Womack Building 229H, CB #7050, Chapel Hill, NC 27599. The University of North Carolina is an Equal Opportunity/Affir-mative Action Employer. Minority and female applicants are encouraged to voluntarily identify themselves.

CASE WESTERN RESERVE UNIVERSITY DEPARTMENT OF GENETICS FACULTY POSITION

The newly established Department of Genetics is currently recruiting a full-time tenure-track faculty member with an active research program in the genetics and biology of C. elegans. The department incorporates the new Center for Developmental Genetics established with a major grant from the Lucille Markey Charitable Trust. Applications from minority groups and women are especially Applications from minority groups and women are especially encouraged. Please send applications and three letters of reference to: A. P. Mahowald, Department of Genet-ics, Case Western Reserve University School of Medi-cine, Cleveland, OH 44106. CWRU is an Equal Opportunity Employer

FACULTY POSITION IN CELL/MOLECULAR BIOLOGY CARNEGIE MELLON UNIVERSITY

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 molecular 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 viate and a concise description of research interests (no more than three pages) and, in addition, have three letters of recommendation sent to:

Dr. Susan Henry, Head Department of Biological Sciences Carnegie Mellon University 4400 Fifth Avenue Pittsburgh, PA 15213

Deadline for applications: 15 December 1988. Carnegie Mellon University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN IMMUNOLOGY

The Department of Biological Science, California State University, Fullerton, invites applications for a full-time, tenure-track appointment (preferably at the rank of in 1989 or 1990. Qualifications include a PhD. (not necessarily in immunology) and appropriate research experience.

The successful candidate will be working in modern aspects of cellular immunology or using immunological techniques to solve fundamental biological problems. The candidate will be expected to conduct a productive research program, to demonstrate a commitment to excellence in teaching undergraduate students, and to direct graduate student research at the master's level. Teaching responsibilities will include an introductory immunology course and other courses in the candidate's area of expertise.

Applicants should submit: curriculum vitae; brief statements of research and teaching interests and plans; and copies of recent publications. Additionally, the appli-cant should arrange to have three letters of recommenda-Committee, Department of Biological Science, Cali-fornia State University, Fullerton, CA 92634. Dead-line for receipt of applications is 9 January 1989 or until a suitable candidate is found. The University is an Affirmative Action/Equal Opportunity Employer and encourages appli-cations from women and minority candidates.

POSITIONS OPEN

Emory University, Department of Radiology, seeks a Ph.D. or M.D. with either NMR spectroscopy or imaging experience for a full-time **FACULTY POSITION**. The candidate must be able to originate fundable research projects using NMR and collaborate with other

search projects using NMR and collaborate with other faculty members (in or out of radiology) on NMR research. Knowledge of spin behavior is essential, and medicine, biology, or biochemistry, analog electronics, and computer science are useful skills. Two 1-meter clinical imagers operating at 0.5 and 1.5 T and a 30-cm 200-MHz instrument, all fully program-mable, will be available. The department is part of a 800-bed tertiary care complex giving ample opportunity for collaborations requiring clinical material. Seven Ph.D. scientists in the radiology department are currently in-volved, full-time, in NMR. Qualified candidates please contact:

Dr. Thomas Dixon, Director Frits Philips Magnetic Resonance Research Center 419 Woodruff Memorial Building **Emory University** Atlanta, GA 30322

Emory University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Department of Biochemistry and Molecular Biology, University of Texas Health Science Center, Houston, invites applications for a tenure-track position at the assistant professor level. We are seeking candidates with backgrounds and interests in molecular biology and/or structural biochemistry, as well as a strong commitment toward developing an independent research program and teaching at the graduate level. Applicants should send curriculum vitae, list of publications, a summary of research interests, and arrange to have three letters of recommendation submitted on their behalf by 31 De-cember 1988 to: Dr. John DeMoss, Department of Biochemistry and Molecular Biology, The University of Texas Medical School of Houston, P.O. Box 20708, Houston, TX 77225. The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

UNIVERSITY OF CALIFORNIA DEPARTMENT OF BIOCHEMISTRY FACULTY POSITION IN MOLECULAR BIOLOGY

The Department of Biochemistry at the University of California, Riverside, invites applications for a tenuretrack appointment at the level of professor, associate professor, or assistant professor, with a joint appoint-ment in the Agricultural Experiment Station. Candidates should have broad training and research interests in molecular biology and biochemistry. Preference will be given to persons utilizing viral or mammalian systems with expertise in the processing and regulation of nucleic acids in gene expression, development, or carcinogenesis. Responsibilities will include direction of an independent Responsibilities will include direction of an independent research program, teaching at the undergraduate and graduate level, and the possibility of eventually assuming a leadership role in the department. Candidates should send a detailed curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests to: J. A. Traugh, Molecular Biology Search Committee, Department of Biochemistry, University of California, Riverside, CA 92521–0129. Deadline for applications is 15 December 1988. The University of California is an Equal Opportunity/Affirmative Action Employer; all qualified candidates, minorities and women are encouraged to apply.

FACULTY POSITION—PHYSICAL CHEMIS-TRY: The Department of Chemistry at Indiana University invites applications for a tenure-track position in experimental physical chemistry at the assistant professor level beginning in September 1989. A dossier including curriculum vitae, list of publications, three letters of reference, and a brief statement of research interests should be sent to: Professor Paul A. Grieco, Depart-ment of Chemistry, Indiana University, Blooming-ton, IN 47405. Deadline for receipt of materials is 1 January 1989. Indiana University is an Equal Opportunity/ Affirmative Action Employer.

Professor

NSERC Industrial Research Chair in Protein Crystallography Faculty of Medicine

University of Toronto

Applications are invited for a tenured position as Full Professor in the Department of Biochemistry, with cross-appointment to the Department of Medical Genetics. The position is an **NSERC Industrial Research Chair** and carries with it funds for: an area detector-based diffraction system, graphics hardware, maintenance costs, supercomputer time, research associate salary, start-up and renovation costs. The successful candidate will have demonstrated ability to establish an internationally competitive research program in protein crystallography and to collaborate on a wide variety of crystallographic problems. An interest in sharing facilities with industry-based investigators is necessary. Candidates must have a Ph.D. or equivalent degree. The incumbent will be responsible for conducting an internationally competitive research program in protein crystallography. Salary will be commensurate with experience.

Closing date for applications is **December 2, 1988**, and the appointment will be made as soon thereafter as possible. Please submit a curriculum vitae and the names of three referees to: Dr. Jeremy Carver, Department of Medical Genetics, or Dr. Harry Schachter, Department of Biochemistry, University of Toronto, Toronto, Ontario, Canada M5S 1A8.

The University of Toronto encourages both men and women to apply for positions.

DEPARTMENT OF BIOLOGY PENN STATE MOLECULAR PIOLOCY

MOLECULAR BIOLOGY AND EVOLUTION

The Department of Biology, The Pennsylvania State University, solicits applications for an appointment at the assistant or associate professor level from biologists who have research interests in the evolutionary aspects of gene structure, organization, function, or regulation. We are especially interested in persons who will establish mutually beneficial interactions with members of an existing group of geneticists studying various aspects of molecular evolution.

A Ph.D. with research specialization in molecular biology and several years of productive postdoctoral research are required.

Applicants should send a curriculum vitae, statement of research interests and goals, reprints of recent publications, and names and addresses of three references, by January 15, 1989, to:

> Dr. Thomas Whittam, Search Committee 516 Mueller Lab **The Pennsylvania State University** University Park, PA 16802 (814) 863-1970

An Affirmative Action/An Equal Opportunity Employer Women and Minorities Encouraged to Apply

TOXICOLOGIST

Lorillard, Inc., a leading manufacturer of tobacco products, has an immediate entrylevel opening for a PhD Toxicologist at our Greensboro, N.C. Research Center.

The successful candidate's primary responsibilities will include study monitoring, report evaluation, and protocol development for an extramural toxicology testing program. Participation in any of several in-house toxicology research and testing activities will be encouraged.

Requirements include a PhD degree and excellent communication skills. An ability to accurately read, evaluate, and interpret scientific data and literature is required, as are the writing skills necessary to communicate key elements to others. Experience with in vitro and in vivo toxicity assessment and inhalation, genetics, and biochemical toxicology is desirable.

Lorillard offers a comprehensive flexible benefits package, a competitive salary and relocation. Gualified candidates should send their resume and salary requirements, to: **H.S. Jessup, Lorillard Research Center, P.O. Box 21688, Greensboro, N.C. 27410.**



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Research Opportunities at Pfizer

Pfizer, a U.S. based multinational pharmaceutical company, has immediate openings for scientists in its Metabolic Diseases Drug Discovery program. You will join a multidisciplinary team at the Central Research Facilities in Groton, Connecticut seeking novel therapeutic agents for the treatment of atherosclerosis.

You should possess an MS or BS degree in physiology, biochemistry or cell biology with relevant laboratory research experience. In addition, you should have experience in one or more of the following:

- Lipoprotein metabolism
- In vivo models of atherosclerosis
- Bile acid metabolism
- Tissue culture

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Please send a resume, description of research experience and names of three references to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



FACULTY POSITION IN EUKARYOTIC GE-NETICS. The Zoology Department will fill a tenuretrack position at the assistant to associate professor level with an investigator working on molecular aspects of genetics in a model eukaryote such as Drosophila or C. elegans. Postdoctoral experience is required. Duties include teaching an undergraduate genetics course, supervising graduate students, and participation in a Molecular and Cellular Biology Program. Liberal start-up support is provided. Salary commensurate with qualifications and experience. Send curriculum vitae and names of three references by 1 December 1988 to: J. G. Kunkel, Geneticist Search Committee, Zoology Department, University of Masschusetts, Amherst, MA 01003. Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF CALIFORNIA IRVINE

Applications are invited for a tenured or tenure-track faculty position in pharmacology. We are especially interested in candidates with an active research program in molecular pharmacology and expertise in neuropharmacology, but qualified candidates in other areas will be considered. A Ph.D. in pharmacology or related area, or an M.D. is required. Level of appointment and salary will be commensurate with achievement and experience. Curriculum vitae, references, and a summary of research interests should be sent before 31 December 1988 to:

Dr. Larry Stein, Chairman Department of Pharmacology College of Medicine University of California Irvine, CA 92717

The University of California is an Affirmative Action Employer.

FACULTY POSITION—MEDICINAL CHEM-ISTRY. The Division of Medicinal and Natural Products Chemistry of the College of Pharmacy at the University of Texas at Austin invites applications for a tenure-track position at the assistant professor level, to be filled by September 1989. The Division is seeking a candidate with a research orientation in bioorganic and/or natural products chemistry using modern spectroscopic techniques. The selected candidate will be expected to show potential for developing a rigorous research program. Participation in undergraduate medicinal chemistry courses and development of graduate courses in the areas(s) of research expertise is expected. A Ph.D. with postdoctoral experience is required, and a background in pharmacy is desirable. Send résumé, a summary of research plans, and the names of three references by 18 November 1988 to: Professor Patrick J. Davis, Head, Division of Medicinal and Natural Products Chemistry, College of Pharmacy, The University of Texas at Austin, Austin, TX 78712–1074. The University of Texas is an Equal Opportunity/Afirmative Action Employer.



FACULTY POSITIONS NORTHWESTERN UNIVERSITY

As part of the continuing development and expansion of the life sciences at Northwestern University, the Department of Biochemistry, Molecular Biology and Cell Biology is seeking candidates for two assistant or associate professor positions. Individuals with strong research interests in areas of cell biology, including intracellular transport of proteins and RNA, regulation of cell growth, receptors and dynamics of cell structure are urged to apply. Exceptionally qualified applicants in other areas will also be considered, as the abilities of the applicants are more important to the department than the particular area of research interest. Research programs in the department include developmental biology, immunology, genetics, virology, and structural biology. Candidates should submit curriculum vitae, a list of

Candidates should submit curriculum vitae, a list of publications, copies of reprints and preprints, a statement of future research objectives and letters of reference from three persons knowledgeable of the candidate's research and teaching abilities to: Dr. Susan Pierce, Chairman, Faculty Search Committee; Department of Biochemistry, Molecular Biology and Cell Biology; Northwestern University; Evanston, IL 60208.

Northwestern University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION IN MICROBIAL MOLECULAR BIOLOGY

The Department of Biological Science, California State University, Fullerton, is seeking applicants for a tenure-track appointment in **microbial molecular biology**, with experience in gene manipulation, to begin in 1989 or 1990. The appointment will be at the assistant or associate professor level. Qualifications include a Ph.D. and appropriate research experience.

The successful candidate will be expected to have a strong commitment to undergraduate and graduate teaching at the master's degree level and to establish an active research program. Primary teaching responsibilities will be in microbiology and one or more of the areas of genetics/molecular biology.

Applicants should submit: curriculum vitae; brief statements of research and teaching interests and plans; and copies of recent publications. Additionally, the applicant should arrange to have three letters of recommendation forwarded separately to: Microbial Molecular Biology Search Committee, Department of Biological Science, California State University, Fullerton, CA 92634. Deadline for receipt of applications is 20 January 1989, or until a suitable candidate is found. The University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minority candidates.

FACULTY POSITIONS IN MOLECULAR BIOLOGY AND MOLECULAR PHARMACOLOGY

The Department of Pharmacology and Molecular Biology at the Chicago Medical School is soliciting applications for several tenure-track positions at any level. Although preference will be given to applicants with research interests in eukaryotic gene regulation; molecular mechanism of action of hormones, opiates, related agents and growth factors; molecular aspects of development and cancer, outstanding candidates in other areas of molecular biology/molecular pharmacology will be considered. The school relocated to a new modern facility adjacent to the very pleasant North Shore community of Lake Bluff, 38 miles from downtown Chicago and yet easily accessible by car or train. Excellent core facilities. Strong M.D.-Ph.D. program with substantial financial support. Salary and other benefits highly competitive. Start-up funds available for junior faculty. Please send curriculum vitae, research plans, and three names of references to: Dr. Samson T. Jacob, Department of Pharmacology, and Cell and Molecular Biology Center, The Pennsylvania State University College of Medicine, P.O. Box 850, Hershey, PA 17033 by 9 December 1988. Chicago Medical School is an Equal Opportunity/Afirmative Action Employer.

FACULTY POSITIONS in molecular genetics and population biology. Two tenure-track positions at the assistant/associate levels. MOLECULAR GENETICIST—to develop courses

MOLECULAR GENETICIST—to develop courses in molecular genetics and participate in a newly formed biotechnology program. POPULATION BIOLOGIST—to develop courses

POPULATION BIOLOGIST—to develop courses in population biology and teach courses in biostatistics and computer applications.

Applicants must have a commitment to teaching at the undergraduate and M.S. levels and a demonstrated ability to develop a vigorous research program. Postdoctoral experience is preferred. Applicants must provide curriculum vitae, a statement of research and teaching interests, transcripts, and have three letters of recommendation sent to: Department of Biology, California State University, Long Beach, CA 90840–3702. These positions will remain open until filled—interviews are likely to commence in December 1988. An Equal Opportunity Affirmative Action Employer.

FISH BIOLOGIST: The South Carolina Wildlife and Marine Resources Department (SCWMRD) has immediate opening for a fish biologist with experience in marine fisheries. Requirements include: M.S. degree; demonstrated writing ability; background in ichthyology, histology, fisheries, computers; willingness to go to sea on research vessels in supervisory capacity. Scuba, taxonomic and supervisory experience desirable. Contact: Dr. G. R. Sedberry, SCWMRD, P.O. Box 12559, Charleston, SC 29412; telephone: 803-795-6350.

FACULTY POSITIONS DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY UNIVERSITY OF UTAH

Applications are invited for tenure-track positions in the Department of Pharmacology and Toxicology at the assistant/associate/full professor level. Applicants must have a doctoral degree, significant postdoctoral research experience, and demonstrated ability to be productive in an academic setting: positions and salaries will be commensurate with experience. Special consideration will be given to candidates with expertise in cardiovascular pharmacology; however, outstanding scientists in other areas of pharmacology also will be considered. Successful applicants will be expected to develop strong, independent research programs with external funding as well as participate in teaching at both graduate and undergraduate levels. A wide variety of interactions with current faculty members is possible and encouraged. Candidates should submit a letter of application, a

Candidates should submit a letter of application, a brief statement of research objectives, curriculum vitae, and the names of at least three persons from whom letters of recommendation can be solicited. Please submit responses to: Dr. Glen R. Hanson, Department of Pharmacology and Toxicology, 1113 Skaggs Hall, University of Utah, Salt Lake City, UT 84112. Applications should be submitted by 31 December 1988 but later applications may be considered if no qualified candidates have been identified by the deadline. The University of Utah is an Equal Opportunity Employer.

FISHERIES ECOLOGIST MICHIGAN STATE UNIVERSITY

The Department of Fisheries and Wildlife invites applications for a faculty position at the assistant professor level beginning 1 July 1989 specializing in fisheries ecology and management with an emphasis in fish habitat analysis and management. This position is a 12month, tenure-track appointment involving a commitment to teaching in treater. Major responsibilities include teaching ichthyology, an introductory course on fish and wildlife of North America, and a graduate level course in fish habitat analysis and fishery management. We desire a faculty member who will actively conduct research in the area of the influence of habitat and other environmental factors on fish populations, their productivity and management. In addition we expect this individual to participate in faculty committees, public service programs and advising of undergraduate and graduate students. Qualifications include a Ph.D. with a specialization in fisheries science and an example in fish habitat analysis and fisheries management. Evidence of ability to interact with state, federal, and private organizations, obtain research grants, conduct research and publish findings is desirable. Salary is competitive, commensurate with training, experience and demonstrated ability. Interested persons should submit a letter of application stating professional goals and objectives, a résumé with supporting materials including transcripts, and three letters of reference by 15 December 1988 to: Dr. William W. Taylor, Search Committee Chairperson, Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI 48824–1222. Telephone: 517-355-4477.

Michigan State University is an Equal Opportunity/Affirmative Action Employer. Minority and female candidates are encouraged to apply for this position.

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

FULL TIME FACULTY POSITIONS HARVARD MEDICAL SCHOOL-BETH ISRAEL HOSPITAL

Positions available for faculty members at various levels to join the new Molecular Medicine Unit at the Beth Israel Hospital and Harvard Medical School.

Applications are invited from scientists having a M.D. and/or Ph.D. degree and postdoctoral experience in molecular biology. New faculty members will be expected to develop independent basic science research programs, particularly in the areas of cell growth and differentiation, ion pumps and channels, or cell receptors. The selected candidates will have the opportunity to work in new laboratories with state of the art equipment designed for molecular and cellular biological research. Start up funds and extensive long term support is available for salaries, technical help, and supplies. The faculty members selected will be expected to spend approximately 90% of their time pursuing research activities. Clinical and/or teaching commitments are not required but can be arranged. Applicants should have sufficient recognition in their field in the form of publications to merit joint faculty appointments at Harvard Medical School. Please send curriculum vitae, a brief statement of research interests, reprints of significant recent work, and the names of three references to:

Dr. Joan Sax Molecular Medicine Unit Beth Israel Hospital 330 Brookline Avenue, Boston, MA 02215.



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PRODUCTION/ANALYTICAL

Fermentation Microbiologist, Molecular Biologist: Requirements include BS, MS in microbiology or biochemistry. 1-3 years experience in large scale microbial and fungal fermentations helpful. Good mechanical aptitude necessary.

Molecular Biology: Requirements include a BS degree in biology or biochemistry with 2-3 years experience in molecular biology or an advanced degree. Duties include the production and analysis of restriction endonucleases, nucleic acid modifying enzymes and nucleic acids.

Enzyme/Protein Analysis: Requirements include a degree in chemistry or biochemistry. 2-3 years experience with traditional wet method chemistry or advanced degree in Biochemistry with emphasis in enzymology including: protein determination, enzyme kinetics preferred.

TECHNICAL SERVICE

These positions offer the opportunity to utilize technical and problem solving skills to provide product information to customers worldwide.

Tissue Culture: Requirements include a degree in biology or biochemistry and 3-5 years general tissue culture lab experience. Scientific writing experience, knowledge of GMP and sterility and validation testing helpful.

Immunochemicals: Requirements include a BS degree in biology or biochemistry along with laboratory experience in one or more of the following areas: Immunohistochemistry, monoclonal antibody development, production and characterization, radioimmunoassay, or tissue culture.

All candidates must possess strong written and verbal communication skills and be able to work independently. Selected applicants will be provided with compensation commensurate with experience and education, plus full company-paid benefits package. Send your confidential resume to: **SIGMA CHEMICAL COMPANY, P.O. Box 14508, St. Louis, MO 63178.**



An Equal Opportunity Employer

FOOD SCIENCE DEPARTMENT HEAD

The University of Arkansas, Fayetteville invites applications for this position just vacated due to retirement. The successful candidate should have a doctorate in Food Science or a closely related discipline, a commitment to teaching, leadership ability in identifying and helping attract extramural support, a willingness to delegate responsibilities, a commitment to student recruiting and to the field of Food Science, and knowledge of the Land Grant System. The Department has eight full-time facul 25 graduate students in M.S. and Ph.D. programs. Offices, well equipped laboratories and a pilot plant are located together in a 32,000-square-foot facility with a new two-story wing occupied in 1985. The University is in the scenic Ozark region of northwest Arkansas, and is part of the Land Grant System. Applicants should submit a letter of interest and qualifications, professional vitae, and the names, addresses, and telephone numbers of at least three references by 10 December 1988 to: **Dr. Paul** R. Noland, Chair, Search Committee, Department of Animal Sciences, University of Arkansas, Fayetteville, AR 72701. The University of Arkansas is an Equal Opportunity/Affirmative Action Institution

HUMAN NUTRITION/METABOLISM

ASSISTANT/ASSOCIATE PROFESSOR, tenuretrack, fall 1989 to teach undergraduate and graduate courses; direct M.S. and Ph.D. students; develop research program in metabolism of macronutrients. Requires: Ph.D. in nutrition or related field; postdoctoral experience, demonstrated research productivity and teaching experience preferred. Deadline: 15 February 1989. Send application letter, curriculum vitae, names of three references to: Dr. Robert D. Reeves, Department of Foods and Nutrition, Justin Hall, Kansas State University, Manhattan, KS 66506; telephone: 913-532-5508. Equal Opportunity Employer/Affirmative Action.

INFECTIOUS DISEASES—The Division of Infectious Diseases, Department of Medicine, Stanford University School of Medicine invites applications for a tenure-line position at the rank of ASSISTANT PRO-FESSOR. An outstanding opportunity exists to pursue an academic clinical research career for an individual with excellent clinical and teaching skills and ability to conduct independent research. The successful candidate will be stationed at the VA-affiliated hospital that is geographically near the Stanford Medical Center. Applicants should send curriculum vitae, a brief statement of research interests, and three names for reference to: Peter O'Hanley, M.D., Ph.D., Chief, Infectious Diseases (111), Vetrans Administration Hospital, 3801 Miranda Avenue, Palo Alto, CA 94304. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.

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

MICROBIOLOGIST / BIOCHEMIST—We are seeking a scientist with expertise in human and/or veterinary microbiology to participate in studies of the chemical specificities and biological roles of microbial lectins. Experience with current technologies for studying specific attachments of microorganism to glycoconjugates is required. Applications including résume and two letters of recommendation should be sent to: David Zopf, M.D., Vice President, Research, BioCarb Inc., P.O. Box 7409, Gaithersburg, MD 20898. An Equal Opportunity Employer.

POSITIONS OPEN

INVERTEBRATE NEUROBIOLOGIST—Tenure-track position open in fall 1989, for assistant or associate professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in invertebrate neurobiology working at the multicellular or systems level. The successful candidate will have research interests in sensory processing, motor control, and/or nervous system development. Postdoctoral experience is preferred. Teaching responsibilities include courses in neurobiology and physiology. Send curriculum vitae, four letters of recommendation, representative reprints, and description of research interests by 15 January 1989 to: Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019. An Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGIST. The New York Hall of Science, an interactive science-technology museum, invites applications for a 3-year, NSF-funded position to assist developing a "hands-on" exhibition on microbiology. Responsibilities include culturing protozoa and bacteria, content research, writing exhibition scripts, microscopy, photomicrography, and supervising biology lab. Knowledge of clinical microbiology or protozoology is preferred, or an M.A. with at least 3 years of laboratory experience. Competitive salary and benefits. Send curriculum vitae and the names and addresses of three references to: Dr. Samuel Taylor, Biology Director, New York, Hall of Science, Flushing Meadow Park, New York, NY 11368.

MOLECULAR BIOLOGY-RNA PROCESSING

A RESEARCH ASSOCIATE position will be available in the laboratory of Thoru Pederson in January 1989, to join projects addressing alternative mRNA processing, spliceosome components, assembly and structure of small nuclear ribonucleoproteins, and the transcription and maturation of U1 and U2 snRNA's. The position can be filled at a senior research associate level for an individual with substantial relevant postdoctoral experience at a salary of \$29,000 to \$37,500. The Worcester Foundation is an academically oriented basic research institute, emphasizing molecular approaches to cell and developmental biology, reproductive biology and neurobiology. The institute is located on a wooded suburban campus 38 miles west of Cambridge. This position carries a competitive finge benefits package. Send curriculum vitae and names of two references to: Tr. Thoru Pederson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.

An Equal Opportunity/Affirmative Action Employer/M/F/H

MOLECULAR GENETICIST. Fort Lewis College Biology Department—molecular geneticist tenure-track position to begin September 1989. Teaching load will include general biology, composition seminar, cell/molecular biology, molecular genetics. Candidate must be dedicated to liberal arts education. Send résumé, three letters of recommendation, and official transcripts to: Dr. Page Lindsey, Department of Biology, Fort Lewis College, Durango, CO 81301. Screening will begin on 9 January 1989. Fort Lewis College is an Affirmative Action/ Equal Opportunity Employer. Women and minorities are urged to apply.

PHYSIOLOGIST

Applications are invited for an anticipated tenure-track assistant professor position in the Department of Zoology and Physiology, Louisiana State University. The Department is seeking an individual with research competence in one of the following areas to complement its existing strengths in comparative physiology: neuroendocrine/neurosensory physiology, comparative biochemistry and membrane biophysics. The successful candidate will be expected to establish a strong research program and contribute to graduate and undergraduate teaching, primarily in vertebrate systems physiology. Candidates must have the Ph.D. degree and postdoctoral training is preferred. Salary commensurate with qualifications and experience. Applicants should send curriculum vitae, a statement of research and teaching interests, and names of three references by 15 January 1989 to: Dr. Albert H. Meier, Department of Zoology and Physiology, Louisiana State University, Baton Rouge, LA 70803-1725 (Telephone: 504-388-1132 BITNET: ZOOPHYS @ LSUVM). LSU is an Equal Opportunity/ Affirmative Action Employer.

POSITIONS OPEN

MOLECULAR NEUROBIOLOGIST

The University of Michigan, Department of Physiology, invites applications for a tenure-track position at the assistant professor level. We are interested in individuals studying the nervous system at a cellular/molecular level. Possible areas of interest could be ion channels, receptors, cell recognition molecules, neuropeptides, or neurosecretion. Candidates should have a Ph.D., M.D., or equivalent degree and a minimum of 2 years of postdoctoral experience. The successful candidate is expected to develop an independent research program and participate in graduate and professional teaching programs of the department. Applications, including curriculum vitae, description of research interests, plans for future research, and names of three references should be sent to: John A. Williams, M.D., Ph.D., Chairman, Department of Physiology, 7744 Medical Science II Building, The University of Michigan is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR NEUROBIOLOGIST

The Department of Biology at the University of Michigan seeks applications from individuals in the area of molecular neurobiology for a tenure-track position at the level of assistant, or possibly associate or full professor. The appointment will begin 1 September 1989. Our preference is for an individual whose research utilizes modern molecular techniques for the study of the nervous system in a animal with well defined genetics. The successful candidate will be expected to maintain an extramurally funded research program and participate in the undergraduate and graduate teaching programs of the department. Applications should include curriculum vitae, publications list, reprints, and a brief statement of future research plans; arrangements should also be made to have three individuals supply letters of recommendation. The deadline of receipt of applications is 15 December 1988. Application materials and letters of recommendation should be sent to:

Chair Neurobiology Search Committee Department of Biology The University of Michigan Ann Arbor, MI 48109–1048

The University of Michigan is an Nondiscriminatory/Affirmative Action Employer.

NUTRITION RESEARCH ASSOCIATE—National Dairy Council, a nonprofit scientific education organization, seeks nutrition research associate with Ph.D. in nutrition or closely related field. Ability to integrate information and to communicate effectively (written and oral) is essential. Previous work experience with health professionals/organizations is desirable. Duties include administration of nutrition research projects, summarizing/interpreting data and serving as liaison to dairy industry groups. Send curriculum vitae and three references to: Vice President of Nutrition Research, National Dairy Council, 6300 North River Road, Rosemont, IL 60018. Equal Opportunity Employer.

ORGANIC ANALYTICAL CHEMIST. Further your skills in the research environment of the Illinois Hazardous Materials Laboratory. We seek an instrumental chemist to direct organic contaminant analyses. Communication and organizational skills, education and experience in environmental chromatography and instrument PM, plus desire to learn mass spectroscopy are required. Submit curriculum vitae with salary history by 15 December 1988 to: Dr. Marvin Piwoni, Hazardous Waste Research and Information Center, 1808 Woodfield Drive, Savoy, IL 61874. Equal Opportunity/ Affirmative Action Employer.

PHYSICAL OCEANOGRAPHER. The Department of the Interior Minerals Management Service is seeking physical oceanographer with interest in largescale oceanographic phenomena and the processes affecting the movement of spilled oil, other pollutants, and sediments. Experience in oceanographic modeling and an advanced degree in physical oceanography are preferred. This is a permanent career position located in suburban New Orleans area. Salary—\$33,218 per annum (GS-12). Submit résumé to: Personnel Branch, MMS, 1201 Elmwood Park Boulevard, New Orleans, LA 70123– 2394. Equal Opportunity Employer.

Air Force Office of Scientific Research

Summer Faculty and Graduate Student Research Program



The USAF Summer Faculty Research Program (SFRP) and Graduate Student Research Program sponsored by the Air Force Office of Scientific Research and conducted by Universal Energy Systems, Inc. (UES) provides research opportunities for qualified faculty members and graduate students of U.S. Institutions of higher education. The research will be conducted at one of 23 participative Air Force Laboratory Centers.

- Electrical Engineering
- Mechanical Engineering

- Aeronautical and Astronautical Engineering
- Biomedical Engineering
- Chemical, Industrial and Civil Engineering
- Physics
- Computer Modeling and Computer Science
- Chemistry
- Mathematics
- Behavioral Science
- Operations Research
- Metallurgy
- Meteorology and Geophysics
- Life Sciences, Biology
- and Biophysics
- Toxicology

To be eligible for participation, individuals must be U.S. citizens currently serving as full-time faculty or graduate students at U.S. Institutions. All qualified applicants will receive consideration without regard to age, color, race, religion, sex, or national origin.

Interested individuals are requested to contact: SFRP Administrator Universal Energy Systems, Inc. 4401 Dayton-Xenia Road Dayton, Ohio 45432 Phone (800) 533-7532 Or (513) 426-9876

JES Universal Energy Systems

Equal Opportunity Employer

Air Force Office of Scientific Research

The USAF Laboratory Graduate Fellowship Program sponsored by the Air Force Office of Scientific Research and conducted by Universal Energy Systems, Inc. (UES) provides 3 year fellowships for qualified graduate students of U.S. Institutions of higher education.



- Electrical Engineering
- Mechanical Engineering
- Aeronautical and Astronautical Engineering
- Biomedical Engineering
- Chemical, Industrial and Civil Engineering
- Physics

Graduate

Fellowship

- Computer Modeling and Computer Science
- Chemistry
- Mathematics
- Metallurgy, Materials Science and Ceramic Engineering
- Meteorology and Geophysics
 Life Sciences, Biology
- and Biophysics
- Toxicology
- Environmental Science and Engineering

Universal Energy Systems

Equal Opportunity Employer

To be eligible for participation, individuals must be U.S. citizens, and receive their baccalaureate by the Fellowship year. All qualified applicants will receive consideration without regard to age, color, race, religion, sex, or national origin.

Laboratory Graduate

Fellowship Program

Air Force

Interested individuals are requested to contact: LGFP Administrator Universal Energy Systems, Inc. 4401 Dayton-Xenia Road Dayton, Ohio 45432 Phone (800) 533-7532

University of California, Davis CELLULAR NEUROBIOLOGY TRAINING PROGRAM

Funding is available to support qualified individuals for training in cellular neurobiology at both postdoctoral and predoctoral levels. Successful applicants will join a young, vigorous neurobiology group that is highly interactive and in which collaborations are common. We particularly encourage participation of trainees in projects involving the expertise of two or more training faculty:

Hilary Anderson, Development of insect nervous systems

Richard Carlsen, Cell biology of axonal and muscle regeneration

Leo Chalupa, Prenatal development of mammalian visual system

Carol Erickson, Morphogenesis and differentiation of neural crest

Mark McNamee, Molecular biology of ACh receptors

Brian Mulloney, Generation and modulation of motor patterns

Pamela Pappone, Biophysics of ion channels Robert Scobey, Retinal physiology Barry Wilson, Cholinesterases and neurotoxi-

Barry Wilson, Cholinesterases and neurotoxi cology

Martin Wilson, Cell biology of the retina

For more information, contact Dr. Brian Mulloney, Director, Cellular Neurobiology Training Program, Department of Zoology, University of California, Davis, CA 95616, or phone

(916) 752-7468.

UCD is an Equal Opportunity/ Affirmative Action Institution.

-HPLC R&D CHEMIST

Supelco, Inc., a Rohm and Haas company and a leading manufacturer of chromatography products, is looking for an HPLC Chemist to join our busy and talented R&D group. The successful candidate will develop new materials, methods, and applications in the exciting and growing HPLC area. This person will also have the opportunity to represent us at conferences and trade shows.

To qualify, you should have a degree (or equivalent) in Analytical, Pharmaceutical, or Organic Chemistry-plus significant hands-on experience in HPLC applications or methods development. A background in pharmaceutical/pharmacological or chiral separations would be a plus.

We offer an outstanding working and living environment with a rapidly growing company in scenic central Pennsylvania, plus a competitive salary, excellent benefits (including 401K plan and profit sharing), and the opportunity for real professional growth.

For confidential consideration, please send your resume, salary history, and a cover letter to: Personnel Department.



PLANT CELL AND TISSUE CULTURE ASSISTANT PROFESSOR AND RESEARCH SCIENTIST THE INSTITUTE OF PAPER CHEMISTRY

APPLETON, WISCONSIN The Institute of Paper Chemistry (IPC) invites applications for a fulltime position, Assistant Professor/Research Scientist, in its multidisciplinary research program on regeneration of commercially important forest tree species via somatic embryogenesis.

The successful candidate must possess a Ph.D. in the plant sciences, with specialization in embryology/histology, four or more years experience in woody plant cell and tissue culture, and a sound record of publication. He or she will be expected to establish graduate courses in cell and tissue culture, microtechniques, and related areas. Experience in advising M.S. and Ph.D. students is desired. Positions provide competitive salaries commensurate with qualifications, and excellent benefit packages. Deadline for applications: 30 days after publications of ad.

IPC is an accredited, independent graduate school and research center in the natural sciences and engineering, supported by the pulp and paper industry for over 55 years. Our programs are conducted in an open, academiclike environment which strongly encourages publication, student participation, and interaction with scientists around the world.

IPC recently announced establishment of an alliance with The Georgia Institute of Technology and other Georgia organizations and institutions of higher education. IPC will retain its independent research and academic programs, and will relocate from Appleton, Wisconsin, to new facilities on the Georgia Tech campus in Atlanta in summer, 1989.

Prospective candidates should send a resume, statement of research interests, and references to:

Associate Director of Personnel The Institute of Paper Chemistry P.O. Box 1039

Appleton, WI 54912-1039 AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Research Technician

Research Technician wanted to join Immunology group to work with Molecular Biologist on genetic studies of Human Autoimmune Diseases. Please submit resume in confidence to: Vincent Agnello, M.D. Department of Laboratory Medicine Lahey Clinic

Medical Center 41 Mall Road Burlington, MA 01805 An equal

opportunity employer



BIOCHEMIST/ MOLECULAR BIOLOGIST

The AMERICAN HEALTH FOUNDA-

TION has an attractive career development opportunity for an individual interested in applying modern techniques of molecular biology to investigate mechanisms of carcinogenesis by tobacco constituents and related human carcinogens.

We seek a Ph.D. with 0-3 years postdoctoral experience who is strongly motivated to develop an independently funded research program.

The appointment will be made at the associate research scientist (assistant professor) level.

The AMERICAN HEALTH FOUNDA-

TION offers excellent facilities and a unique environment for research on mechanisms of tobacco carcinogenesis. Please submit resume to:

Dietrich Hoffmann, Ph.D.



or Stephen S. Hecht, Ph.D. AMERICAN HEALTH FOUNDATION 1 Dana Road Valhalla, NY 10595

Equal Opportunity Employer M/F/H/V

SCIENTIFIC EXCHANGES NAS Scientific Exchange Program with the U.S.S.R. and Eastern Europe

The National Academy of Sciences (NAS) invites applications from American scientists who wish to make visits beginning during the period January 1, 1990 through December 31, 1990 to the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Long-term research visits of 3 to 12 months duration are encouraged, particularly if contact with colleagues in the other country has already been established. The minimum length of visits is one month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by June 1989 in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy and those aspects of the economic and social sciences that involve quantitative analysis as a primary consideration. Other scientific disciplines not explicitly mentioned will be considered on a case-by-case basis. Necessary expenses will be met by the NAS and the foreign academy, including reimbursement for long-term visitors for salary lost up to a predetermined maximum and expenses for accompanying family members for visits exceeding five months.

Requests for applications should reach the National Academy of Sciences not later than February 14, 1989. Applications must be postmarked by February 28, 1989. Address application requests to:

> National Academy of Sciences Office of International Affairs Soviet and East European Affairs (HA-166) 2101 Constitution Avenue, NW Washington, D.C. 20418 Telephone: (202) 334-2644

Public Service Commission of Canada

Commission de la Fonction publique du Canada

Medical Bacteriologist

Health and Welfare Canada Drugs Directorate, Bureau of Biologics Ottawa, Ontario

We require an experienced medical bacteriologist to manage the operations of the Division, including laboratory control testing, licensing and clinical studies of all bacterial products to ensure their potency and safety for use by the Canadian population. You will direct research on topics relevant to the operations of the Division, and perform clinical studies on existing and new bacterial vaccines.

You require graduation from a recognized school of medicine and eligibility for a license to practice medicine in a province of Canada. In addition, you require significant laboratory and managerial experience in testing, research and medical evaluation of bacterial products. Experience in biochemistry and immunology is desirable. Knowledge of the English language is essential.

We offer a salary ranging from \$68,846 to \$78,166 (under review) commensurate with your qualifications and experience.

> Send your application form and/or résumé, quoting reference number S-88-31-7831-49DL-G35, to: Diane Léger (613) 996-8053 Public Service Commission of Canada 171 Slater Street Ottawa, Ontario Canada K1A 0M7

Closing date: December 30, 1988

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has two immediate entry-level openings in Cincinnati, Ohio for scientists with Ph.D. or postdoctoral training. These openings are in the Human Safety Division at the Miami Valley Laboratories.

Cell Biologist

Experience in measuring cell proliferation/ differentiation or other cellular responses to environmental influences, and experience in cell culture is required. In addition, experience in the use of immunochemical, histochemical and *in situ* hybridization techniques is desirable.

Molecular Biologist

Research experience in molecular biology required to establish a research program in the area of oncogene activation and gene suppression as it relates to neoplastic transformation induced by chemicals. Experience in the areas of gene transfection, DNA sequencing, nucleic acid hybridization, and cell culture techniques is desirable. The successful candidate will join an investigative team currently studying specific aspects of cell transformation, tumor promotion, chemical mutagenesis, and DNA damage/repair.

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Applicants must be U.S. citizens or permanent residents. Specify position of interest, and send resume and publication list to:

Dr. T.J. Logan, Manager Ph.D. Recruiting, Dept. HSD THE PROCTER & GAMBLE COMPANY Miami Valley Laboratories P.O. Box 398707 Cincinnati, Ohio 45239-8707

An Equal Opportunity Employer

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NEUROBIOLOGIST—Assistant Professor—Tenure-Track—The candidate must have expertise in neurophysiology and will teach neurobiology, animal physiology, and cell physiology. The candidate will also be expected to develop a research program that involves undergraduates. Interest in participating in interdisciplinary programs such as Gender Studies or American People of Color is welcome. Ph.D. required. Macalester College is a highly selective undergraduate liberal arts institution. The Biology Department is committed to providing a high quality research-based curriculum for our students. Additional information concerning this position can be obtained from a departmental representative at the November 1988 Neuroscience meetings in Toronto or from the department chair. Applicants should submit curriculum vitae, reprints, and the names of three references to: Dr. James R. Smail, Chair, Department of Biology, Macalester College, St. Paul, MN 55105. Application deadline is 31 December 1988. *Macalester College is an Equal Opportunity/Affirmative Action Employer*.

NEUROSCIENCE FACULTY POSITIONS, University of Wisconsin–Madison. The Department of Neurophysiology invites applications for two tenuretrack positions at the assistant or associate professorship level. We are interested in applications from individuals whose demonstrated research emphasizes molecular, cellular, integrative, or developmental neuroscience. The successful candidate is expected to develop a vigorous independent research program and participate in the medical and graduate student teaching programs of the department.

Åpplicants should send curriculum vitae, list of publications, summary of past work and accomplishments, a statement of future research plans, and the names and addresses of three references to: John F. Brugge, Chairman, Department of Neurophysiology, 273 Medical Sciences Building, Madison, WI 53706. The University of Wisconsin-Madison is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.

PLANT ECOLOGIST. The Institute of Arctic Biology and Department of Biology and Wildlife announce a tenure-track, 9-month position, rank open. Those with research interests in physiological ecology are encouraged to apply, but outstanding applications from other areas of plant ecology also will be considered. The successful candidate will be expected to develop a strong research program in plant ecology of northern terrestrial environments, teach an average of one course per year in some area of plant ecology or physiology, and advise graduate students. A significant opportunity exists in long term, multidisciplinary ecological research facilities include a modern plant-growth facility currently under development. Curriculum vitae, a statement of research and teaching interests, and names of three references should be sent by 10 December 1988 to: W. S. Armbruster, Chair, Plant Ecology Search Committee, Institute of Arctic Biology, University of Alaska Fairbanks, AK 99775–0180. UAF is an Equal Employment Opportunity/Affirmative Action Employer and Educational Institution.

PLANT MOLECULAR BIOLOGIST

The Department of Biological Sciences at California State University, Chico, invites applications for a tenuretrack, assistant professorship beginning with the 1989– 1990 academic year. The successful candidate will have a doctoral degree with specialization in plant molecular biology, a broad background in plant science, and a working knowledge of specialized techniques in the field of plant development such as cell tissue culture, protoplast fusion, and recombinant DNA techniques. A strong interest in teaching excellence is essential. Responsibilities will include teaching an upper division cell biology course, upper division/graduate course in area of expertise, an introductory molecular biology course for majors, and laboratory sections in basic biology. The establishment of a research program involving undergraduate and graduate students is expected. Applicants should submit a letter of application, curriculum vitae, complete academic transcripts, and three letters of reference to: Dr. William F. Derr, Chair, Department of Biological Sciences, California State University, Chico, CA 95929–0515 by 15 December 1988. Equal Employment Opportunity/Affirmative Action/IRCA Employer.

POSITIONS OPEN

PHARMACOLOGY FACULTY POSITION OHIO UNIVERSITY

The Program in Physiology and Pharmacology at Ohio University seeks to fill a tenure-track pharmacology faculty position at the assistant or associate professor level. A Ph.D. degree in pharmacology and 2 years of postdoctoral research experience is required. This position is a joint appointment in the College of Osteopathic Medicine and the Department of Zoological and Biomedical Sciences. Although preference may be given to candidates with training and expertise in neuropharmacology, candidates from other specialties are strongly encouraged to apply. The successful candidate is expected to develop a strong, independent and externally fundable research program. Collaborative opportunities exist in several areas including: biochemical pharmacology particularly signal transduction and second messengers in stimulus response coupling, cardiovascular and autonomic pharmacology, endocrinology and neurobiology. The successful candidate is required to participate in teaching of pharmacology to osteopathic medical students, and to participate in training of graduate (M.S./ Ph.D.) students in the Program in Physiology and Pharmacology within the Department of Zoological and Biomedical Sciences.

The letter of application, curriculum vitae, description of current and future research plans, copies of most significant publications, and three letters of recommendation must be received by 15 December 1988. Address to: The Chairperson, Pharmacology Search Committee, Program in Physiology and Pharmacology, Room 228, Irvine Hall, Ohio University, Athens, OH 45701.

Ohio University is an Affirmative Action/Equal Opportunity Employer.

Pharmaceutical research—PHARMACIST to provide scientific information about company's nutritional products to doctors and company reps in France and Japan. Design and monitor clinical studies of products in France and Japan. Review worldwide promotional material to verify scientific accuracy. 1 year of pharmaceutical research required. Must speak, read, and write Japanese, French, and English. \$32,400 per year. Send résumé to: Pennsylvania Job Service Office, 6706 Garden Court Road, Upper Darby, PA 19082. Refer to #4208465.

PHARMACOLOGY—The Department of Pharmacology and Toxicology at the University of Arkansas is seeking applications for a tenure-track faculty position at the ASSISTANT OR ASSOCIATE PROFESSOR level. Candidates with a strong record of research productivity in immunopharmacology, cardiovascular pharmacology, or molecular aspects of drug abuse are especially encouraged to apply although applicants with other research interests will also be considered. Interested applicants should send curriculum vitae to: Dr. Donald E. McMillan, Department of Pharmacology and Toxicology, University of Arkansas for Medical Sciences, 4301 West Markham Street, Slot 611, Little Rock, AR 72205. UAMS is an Equal Opportunity Employer.

PLANT CELL BIOLOGIST

The Department of Botany at the University of Wyoming invites applications at the rank of assistant or associate professor in plant cell biology. The position involves teaching at the undergraduate and graduate level, and the development of a vigorous research program. Candidates are sought who use modern approaches to address basic problems in the structure and function of plant cells. Active participation in interdepartmental programs in cellular/molecular biology is desired. A Ph.D. degree is required and postdoctoral experience is preferred. Salary will be commensurate with experience and qualifications. The appointment begins in August 1989. Qualified individuals should send a statement of research interests, curriculum vitae, graduate transcripts, and arrange to have three letters of reference sent by 15 December 1988 to: Professor Thomas C. Vogelmann, Department of Botany, Box 3165 University Station, The University of Wyoming, Laramie, WY 82071– 3165.

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

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE position available for a physiological ecologist to study the effects of acid precipitation and other air pollutants on forest ecosystems especially in areas such as the rhizosphere, stress physiology, or growth and development. Send curriculum vitae and have transcripts and three letters of recommendation sent by 5 December 1988 to: Dr. Richard Klein, Botany Department, University of Vermont, Burlington, VT 05405. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE IN RE-SEARCH position immediately available. A recent Ph.D. in molecular biology with experience in cell culture techniques, genomic libraries, cell transfection, and assaying for class I and II MHC gene expression is sought to work on a funded project in transplantation biology. Salary commensurate with experience. Apply to: Graeme L. Hammond, M.D., Department of Surgery, Yale University School of Medicine, P.O. Box 3333, New Haven, CT 06510. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW

Seeking a postdoctoral fellow to participate in the mutagenesis and mammalian cell expression of the envelope glycoprotein of the HIV-1 retrovirus for structural and x-ray crystallographic studies.

Competence in recombinant DNA technology and an interest in protein structure are essential. Experience in protein chemistry and/or immunology is desirable. This grant-funded position is available immediately and is part of an ongoing collaborative project with **Dr. Don Wiley** of Harvard University. It is anticipated that the great majority of time will be spent at Genentech in South San Francisco, California with an opportunity to also spend time in Cambridge, Massachusetts.

Please send a résumé of educational background, experience, and publications with the names of three references to: Dr. Phillip Berman, Department of Developmental Biology, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080. We actively support Affirmative Action and Equal Employment Opportunity. Women and minorities are encouraged to apply.

GENENTECH, INC.

POSTDOCTORAL FELLOW IN ECOLOGY

Applications are solicited for an anticipated 2-year postdoctoral appointment beginning August 1989 with preferred interests in animal-microbe interactions in aquatic systems or larval ecology. The successful applicant will initiate an independent research program, participate in on-going departmental research program, participate in on-going departmental research projects, and teach one course per academic year. Salary commensurate with qualifications and experience. Closing date is 15 January 1989. Please send curriculum vitae, a letter describing research interests and three letters of recommendation to: Dr. John Fleeger, Department of Zoology and Physiology, Louisiana State University (LSU), Baton Rouge, LA 70803–1725 (Telephone: 504-388-1738 BITNET: ZOFLEE @ LSUMVS). LSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION: The Mayo Clinic Endocrine Research Unit has excellent training opportunities for postdoctoral fellows in the area of diabetes mellitus, metabolism, thyroid disease, and bone and mineral metabolism. The components of the training program include a focused research experience in the laboratories of established investigators, formal didactic course work, seminars and conferences, a distinguished lecture series, and intra- and extramural presentations. Training grant faculty consists of nine NIH-funded staff investigators with adjunct faculty in both the basic science and clinical departments.

Candidates must have U.S. citizenship or a Permanent Immigrant Visa and should have the equivalent of a M.D. or Ph.D. degree. Candidates have the equivalent of a M.D. or Ph.D. degree. Candidates interested in applying should contact: Morey W. Haymond, M.D., Mayo Clinic, Endocrine Research Unit, 5-164 West Joseph, Rochester, MN 55905. Telephone: 507-285-4300. An Equal Opportunity/Affirmative Action Institution.

EXECUTIVE BRANCH SCIENCE AND ENGINEERING FELLOWSHIP

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for a 1-year Executive Branch Science and Engineering Fellowship to begin in early September, 1989. The fellowship program provides an opportunity for an accomplished and societally aware postdoctoral to mid-career scientist to participate in and contribute to the public policymaking processes within one of several agencies in the Executive Branch of the Federal government. Placement will be made at an appropriate Federal agency, based upon the agency's needs and the interests and expertise of the Fellow. Included in the fellowship program is an intensive science policy oreintation and a year-long seminar series dealing with a wide array of science and technology issues.

Prospective Fellows may apply from any physical, biological, or behavioral science or any field of engineering. Qualified applicants must demonstrate exceptional competence in some area of science or engineering, be flexible, and have some experience and/or a strong interest in applying knowledge toward the solution of societal problems.

The 1989–1990 AAAS Executive Branch Science and Engineering Fellow will receive a stipend of \$30,000; an additional \$2,000 is available for relocation expenses and travel in connection with the program.

Applications must be submitted by 15 January 1989, with the award to be announced about 1 May 1989. For detailed program information and specific application requirements, write:

Executive Branch Science and Engineering Fellowship Program American Association for the Advancement of Science 1333 H Street, NW, Washington, DC 20005 Telephone: (202) 326-6600

SCIENCE, ENGINEERING, AND DIPLOMACY FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS), in cooperation with the U.S. Agency for International Development (AID) and the Department of State (STATE) is seeking applicants for approximately 12 Science, Engineering, and Diplomacy Fellowships. Fellows will spend 1 year, beginning 1 September 1989, working either in the Bureau of Oceans and International Environmental and Scientific Affairs of the Department of State or in one of several bureaus and offices of the Agency for International Development. Other assignments may also be possible.

Prospective Fellows must demonstrate exceptional competence in some area of science or engineering, be flexible, have some experience and/or a strong interest in applying knowledge toward the solution of problems in the area of foreign affairs, and have a Ph.D. or equivalent in years of experience. Awardees will work on scientific and technical subjects in international affairs; foreign policy for STATE and international development for AID. In general, individuals are urged to apply from any area of physical, biological, behavioral, and social science and engineering and whose experience and training is applicable to any one of the following areas: food and agriculture; health and population; nuclear nonproliferation; scientific exchange; forestry, natural resources and ecology; oceans and fisheries; communications; national security; and human resources and education, among others.

The Fellows will serve a 1-year appointment at a salary consistent with education level and experience, if possible, but not exceeding the GS-12 level (beginning at about \$34,000). A security clearance process will be initiated after selection. The clearance must be obtained before a selectee can begin work in STATE or AID and the fellowship award is contingent upon the selectee obtaining this clearance.

Deadline for receipt of applications is 15 January 1989. For more information and application details write:

Science, Engineering, and Diplomacy Fellows Program American Association for the Advancement of Science 1333 H Street, NW, Washington, DC 20005 Telephone: (202) 326-6600

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

CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for two 1-year Congressional Science and Engineering Fellowships it will offer for the period beginning 1 September 1989. The fellowship program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policymaking processes within the Congress. Fellows work as special legislative assistants within the congressional staff system.

Persons may apply from any physical, biological or behavioral science or any field of engineering. The term "science" is used broadly to include the system sciences, public health, and other technical professions. In addition to the fellowships awarded by the AAAS, about 15 others are given by other participating professional societies. The AAAS runs a year-long seminar program for both its own Congressional Science and Engineering Fellows and those selected by the participating societies. Addresses of all participating societies are available from the address listed below.

The 1989–1990 AAAS Congressional Science and Engineering Fellows will receive a stipend of \$30,000; an additional \$2,000 is available for relocation expenses and travel in connection with the program.

The deadline for submission of application materials is 15 January 1989. The award will be announced about 1 May 1989. For detailed information on the program and specific application requirements, write:

Congressional Science and Engineering Fellows Program American Association for the Advancement of Science 1333 H Street, NW, Washington, DC 20005 Telephone: (202) 326-6600

POSTDOCTORAL FELLOWSHIP available immediately in thrombosis and atherosclerosis research. Background in arachidonic acid metabolism, prostaglandin biochemistry, omega-3 fatty acid metabolism, or GC/ MS analysis desirable, but not essential. Studies will include arachidonic acid and omega-3 fatty acid metabolism in platelets, vascular tissue and monocytes, and their relationship to thrombosis and atherosclerosis. Send curriculum vitae and names of three references to: Victor A. Skrinska, Ph.D., Cleveland Research Institute, 2351 East 22nd Street, Cleveland, OH 44115.

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

POSTDOCTORAL POSITION available in the field of bone marrow stem cell research and bone marrow transplantation. Current projects include the influence of the pedigree of donor marrow on long term hematopoietic function in recipients following marrow transplantation, mechanisms of engraftment and graft rejection of T depleted marrow across varying genetic barriers, and the role and long term effect of lymphokine use in engraftment and hematopoietic recovery following marrow transplantation. Salary is negotiable depending on experience. Applicants should send curriculum vitae and three letters of reference to: Dr. Peter Mauch, Joint Center for Radiation Therapy, Harvard Medical School, 50 Binney Street, Boston, MA 02115. An Equal Opportunity Employer.

POSTDOCTORAL POSITION to study new antiviral agents is available for an individual with expertise in virus replication. Candidate will interact with a team involved in immunological, pharmacokinetic and RNA virus studies on drug delivery systems and efficacy. Candidate will help supervise a drug screening facility and participate in testing new antiviral compounds in animal models. Potential agents also will be evaluated at a molecular level. Salary: \$22,000. Send curriculum vitae and names of three references to: Dr. Brian E. Gilbert, Department of Microbiology and Immunology, Baylor College of Medicine, 1 Baylor Plaza, Houston, TX 77030.

POSTDOCTORAL POSITION available 1 December 1988 to study the use of fetal cortical transplants in the repair of CNS lesions in the newborn rat. Background in immunocytochemistry, electrophysiology, liquid chromatography, or receptor binding is desirable. Send curriculum vitae and the names of three references to: Dr. Anthony J. Castro, Department of Anatomy, Loyola University Stritch School of Medicine, Maywood, IL 60153. Loyola University of Chicago Medical Center is an Equal Opportunity Educator and Employer.

POSTDOCTORAL POSITION available immediately to study cholesterol topogenesis. We are exploring in the human fibroblast the intracellular pathways by which newly synthesized and endocytosed sterols are brought to their proper disposition, particularly in the plasma membrane. Applicants should submit curriculum vitae and three letters of reference to: Dr. Y. Lange, Departments of Pathology and Biochemistry, Rush-Presbyterian–St. Luke's Medical Center, 1653 West Congress Parkway, Chicago, IL 60612.

POSTDOCTORAL POSITION available immediately to use molecular biological techniques to study marine bacteria in their natural habitats. Experience with genomic libraries, probe development, cloning and sequencing is strongly preferred. Project includes field work at marine labs (Catalina, Bermuda) and on ships. Send résumé, reprints, and names and telephone numbers of three references to: Dr. J. A. Fuhrman, Biological Sciences, University of Southern California, Los Angeles, CA 90089–0371.

POSITIONS OPEN

POSTDOCTORAL POSITION to work on multielectron-redox enzymes or RNA/DNA chemistry. Applicants should have a background in either multinuclear NMR, application of ESR to characterize reaction intermediates, or site-directed mutagenesis. Submit a full curriculum vitae and have three letters of reference sent directly to: Dr. J. A. Cowan, Department of Chemistry, Ohio State University, 120 West 18th Avenue, Columbus, OH 43210.

POSTDOCTORAL POSITION

Available immediately, for computer studies of protein structure and folding. Applicant should have strong background in biophysical chemistry and computer programming. Starting salary \$20,000. Send curriculum vitae, statement of research interests, and names of three references to:

Dr. George Rose Department of Biological Chemistry The Milton S. Hershey Medical Center The Pennsylvania State University P.O. Box 850P Hershey, PA 17033

An Equal Opportunity/Affirmative Action Employer

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

POSTDOCTORAL POSITION

Prominent medical center has an immediate opportunity available to study the cell biology of viral infection. Ph.D. required with training/experience in immunology, virology, or cell biology. We offer an excellent salary (commensurate with experience). Send curriculum vitae and three letters of recommendation to: Dr. Eva B. Cramer, Department of Anatomy and Cell Biology, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box #5, Brooklyn, NY 11203. Equal Opportunity / Affirmative Action Employer. DMC#C-0225

POSTDOCTORAL POSITION for work on the relationship between myocardial electrolyte metabolism and aspects of cell biology, including vulnerability to injury. Techniques to be used include: muscle mechanics, biochemistry, and ultrastructure. Send curriculum vitae, names of three references, and discussion of long-range plans to: Dr. S. Bloom, Department of Pathology, University of Mississippi Medical Center, Jackson, MS 39216. Equal Opportunity Employer, M/F/H/V.

POSTDOCTORAL POSITION ENVIRONMENTAL CHEMIST

Available for individual to work in our Hazardous Materials Laboratory. Duties include development of original methods for the analysis of nonconventional environmental pollutants through the use of liquid chromatography/mass spectrometry (particle beam and thermospray). Ph.D. required with experience in environmental chemistry, liquid chromatography, and spectrometry. Salary \$2470 monthly with excellent benefit package. Send résumé by 23 November 1988 to: California Public Health Foundation, Department RS, 2001 Addison Street, Suite 210, Berkeley, CA 94704– 1103. We are proud to be an Equal Employment Opportunity/ Afirmative Action Employer.

A POSTDOCTORAL POSITION IN DEVEL-OPMENTAL BIOLOGY is available for work on the molecular biology of cell surface receptors in the development of exocrine cells. Studies in this laboratory are directed at explaining some of the molecular mechanisms involved in the regulation of secretory cell differentiation and the appearance of specific cell surface receptors which control exocrine function. Applicants should send their résumés and letters of reference to: Dr. Leslie S. Cutler, Room LM068, University of Connecticut Health Center, Farmington, CT 06032. The University of Connecticut is an Equal Opportunity/Affirmative Action Employer, M/W/H.

POSITIONS OPEN

POSTDOCTORAL POSITION available to synthesize modified DNA probes. The physical and chemical properties of the probes will be investigated and the probes used as inhibitors of gene expression. Organic and/or biophysical chemistry background required. Send curriculum vitae and three letters of reference to: Dr. Thomas Mechan, Department of Pharmacy, S-926, University of California, San Francisco, CA 94143– 0446.

POSTDOCTORAL POSITION. A funded postdoctoral position is available for work on in vitro bacteriophage DNA metabolism and techniques for fractionating high molecular weight DNA. Send curriculum vitae with at least two references to: Dr. Philip Serwer, Department of Biochemistry, The University of Texas Health Science Center, San Antonio, TX 78284– 7760. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. Isolation and characterization of multiallelic mating-type, regulatory genes (MAT) from the filamentous Basidiomycete, Schizophyllum commune. Transformation (Mol. Gen. Genet. **205**, 103; Specht et al., Exp. Mycology, vol. 12, in press) has been used to isolate several Schizophyllum genes (Curr. Genet. **12**, 547) including the Aa MAT alleles [Giasson et al., Genome **30**(s1), 300 (1988)]. Future work concerns: structure and expression of MAT alleles, MAT gene products and MAT control of MAT regulated genes. Available January 1989 for 2 years. Send curriculum vitae, reprints or statement of research interests, and three letters of reference to: **Dr. Robert C. Ullrich, Department of Botany, University of Vermont, Burlington, VT 05405.**

POSTDOCTORAL POSITION IN REPRO-DUCTIVE PHYSIOLOGY. Immediate opening for a postdoctoral fellow interested in the isolation and purification of novel gonadal hormones and in vivo and in vitro experiments examining the roles of these hormones in the regulation of gonadotropin secretion. Applicants should have a strong background in reproductive biology and experience in cell culture and/or protein purification techniques. Salary is \$20,000 per annum plus benefits. Send curriculum vitae and three references to:

Douglas R. Danforth, Ph.D. The Jones Institute for Reproductive Medicine Department of Obstetrics and Gynecology Eastern Virginia Medical School 855 West Brambleton Avenue, Suite B Norfolk, VA 23510

Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE, Brookhaven National Laboratory (BNL). Position available for recent Ph.D. in organic or

Position available for recent Ph.D. in organic or physical organic chemistry interested in biomedical research with positron emission tomography (PET). Candidates with training in biochemistry and experience in organic synthesis will also be considered. Broad synthetic knowledge required to develop compounds labeled with positron emitters carbon-11, nitrogen-13 and fluorine-18. Rapid synthetic methods for most classes of a broadly based PET program which is both multi- and interdisciplinary. A strong physical chemistry background is needed. Training in radiochemistry or a course in radiochemistry is desirable but not necessary. Fast labeling methods applied to a wide variety of compounds is a burgeoning field with centers actively seeking chemists to work in biomedical research. A research associate position in BNL's established program can lead to numerous opportunities. Interested candidates should send résumé and names of three references to: Dr. Alfred P. Wolf, Chemistry Department, Brookhaven National Laboratory, Upton, Long Island, NY 11973. Equal Opportunity Employer M/F.

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

Our next breakthrough may be yours.



Some of the most enduring contributions in medical research are coming out of the pharmaceutical research laboratories of Parke-Davis located in Ann Arbor, Michigan and Morris Plains, New Jersey. C. Our \$200-million annual commitment to large-scale drug discovery programs is setting the pace for progress across 11 major therapeutic areas, including cancer, bacterial infection and diseases of the central nervous, cardiovascular and respiratory systems. With a supportive, state-of-the-art research environment that's conducive to individual achievement, you can add another name to our long list of pharmaceutical breakthroughs. If you have an advanced scientific or medical degree in the life sciences, any branch of chemistry, pharmacy, or biostatistics, discover your potential with Parke-Davis. Send your resume or curriculum vitae, in confidence, to: Mr. Robert Gaskin, Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105. We are an equal opportunity employer.



Pharmaceutical Research Division / Warner-Lambert Compar

POSTDOCTORAL RESEARCH ASSOCIATE to study pathogenesis of rheumatoid arthritis and supervise staff in the Immunology Research Laboratory. Project involves generating T cells clones from tissues of diseased patients and analyzing in vitro reactivity in both proliferation and cytotoxic assays to putative chondrocyte antigen targets and cartilage matrix components. Expertise in the relevant techniques is an absolute prerequisite. Send curriculum vitae, salary requirements, and names of three references to: Eugene Lance, M.D., Ph.D., Shriners Hospitals for Crippled Children, 1310 Punahou Street, Honolulu, HI 96826. An Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

Ph.D. in biochemistry or neurochemistry with 0 to 3 years of experience. Research will focus on regulation of lipid membrane asymmetry in the presence of ethanol and other drugs. Emphasis will be on the functional consequences of changes in asymmetry, the role of antiphospholipid antibodies and the mechanisms that may maintain lipid asymmetry of the membrane. These studies will utilize biophysical, biochemical, and cell culture techniques. Salary negotiable. Send curriculum vitae, along with names of three references, to: W. Gibson Wood, Ph.D., VA Medical Center, GRECC, 111G-JB, St. Louis, MO 63125.

POSTDOCTORAL RESEARCH FELLOWSHIP IN BEHAVIORAL NEUROLOGY/NEUROPSY-CHOLOGY. A postdoctoral position in behavioral neurology or neuropsychology is currently available in the Department of Neurology at Temple University Hospital. The successful candidate will be expected to participate in cognitive neuropsychological investigations of visual processing, neglect and acquired language disorders, clinical work may be available but is not obligatory. Candidates with M.D. and Ph.D. degrees will be considered. Applicants should contact: H. Branch Coslett, M.D., Department of Neurology, 3401 North Broad Street, Philadelphia, PA 19140. An Equal Opportunity/ Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Immediate opening for postdoctoral research associate to work on DNA damage and DNA repair. Background in biochemistry or molecular biology. Send curriculum vitae to: Dr. Nahum J. Duker, Department of Pathology, Temple University Medical School, 3400 North Broad Street, Philadelphia, PA 19140. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS CELL AND MOLECULAR BIOLOGY OF LYMPHOCYTES

Position available to qualified applicants to work on the cell biology of antigen processing using a model antibody to peptide:class II MHC complexes. Background in immunoelectron microscopy, cell fractionation, and the cell biology of endocytosis desirable. Position available to work on the cell and molecular

Position available to work on the cell and molecular biology of CD4:T cell receptor interactions on T cells. Experience in gene transfection, gene cloning and vector construction desirable.

Yale University and the Howard Hughes Medical Institute are Equal Opportunity Employers

Charles A. Janeway, Jr. Section of Immunobiology Howard Hughes Medical Institute Yale University School of Medicine 310 Cedar Street New Haven, CT 06510

The Department of Chemistry, Indiana University, invites applications for a tenured position in organic chemistry at the level of **PROFESSOR**. An outstanding, established teacher-scholar is sought whose research interests will complement those of the current staff. The position is to be occupied in the academic year 1989/ 1990. Applicants should submit curriculum vitae and a list of publications to: **Professor Paul A. Grieco, Department of Chemistry, Indiana University, Bloomington, IN 47405** before 1 December 1988. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Prominent medical center has an immediate opportunity available for a candidate with a strong background in biochemistry to participate on a 3-year NIH-funded project to investigate signal transduction in isolated gastric cells. Candidates should have a Ph.D. in biochemistry with experience in protein isolation and characterization, and expertise in SDS-PAGE, column chromatography, HPLC, TLC, and iso-electric focusing. We offer a salary range of \$26,000 to \$32,000 (commensurate with experience). Send curriculum vitae with names, addresses, and telephone numbers of three references to: Dr. Jean-Pierre Raufman, SUNY Health Science Center at Brooklyn, 450 Clarkson Avenue, Box #1196, Brooklyn, NY 11203–2098. Equal Opportunity/Affirmative Action Employer. DMC#C-0223

Washington, DC—Immediate **POSTDOCTORALS** for gene cloning and chromatin studies on Poly (ADPribosylation) involving replication, expression, oncogene proteins, and retroviral expression. **Collaboration with leading labs at NIH**. Call 202-687-1718 or send curriculum vitae, reprints, and names of references to: Dr. **Mark Smulson, Department of Biochemistry, Georgetown University School of Medicine, Washington, DC 20007.**

University of California, San Francisco (UCSF) RA-DIATION ONCOLOGY GRADUATE AND POSTDOCTORAL RESEARCH TRAINING PO-SITIONS available. Areas of research involve basic and applied studies utilizing molecular and cellular approaches, small and large animals, and clinical trials. Effects of UV, ionizing radiation, chemicals, drugs, and hyperthermia are being studied. Predoctoral students will receive Ph.D. degrees through the UCSF Biophysics Graduate Group. Contact or call: Dr. William C. Dewey, UCSF, RORL, CED-200, Box 0806, San Francisco, CA 94143. Telephone: 415-476-2461. An Equal Opportunity/Affirmative Action Employer.

Neuroscientists

Pfizer's expanding commitment to neuroscience research has created new career opportunities at the level of Research Scientist. These positions require a PhD in a neurosciencerelated discipline and 2-3 years of additional experience during which a solid record of research achievement has been established. Evidence of the practical application of research techniques to the field of neuropharmacology also is required.

You will be expected to interact with a multidisciplinary research team whose goal is the discovery of novel drugs that act on targets in the central nervous system. Your scientific expertise should be compatible with a role in the research and development of pharmacotherapy for one or more of the following clinical applications: affective disorder, anxiety, psychosis, addiction, pain, obesity or dementia.

These positions offer a stimulating intellectual environment with potential for professional growth. We are located in an attractive southeastern Connecticut shore location and offer a competitive salary/benefits package with relocation assistance. Qualified applicants should submit their resume, description of research experience and references to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

WOODS HOLE OCEANOGRAPHIC INSTITUTION POSTDOCTORAL FELLOWSHIPS

Ocean Science and Engineering

Applications are invited from new or recent doctorates in science or engineering with interests in physical oceanography, meteorology, marine chemistry, marine geology and geophysics, biological oceanography, or oceanographic engineering. Recipients of awards are selected on a competitive basis, with primary emphasis placed on research promise.

Marine Policy and Ocean Management

Research fellowships are offered to individuals in the social sciences, law, the humanities, or natural sciences to apply their training to problems or issues that involve the use of the oceans. Presently research follows thematic areas such as Marine Science and Public Policy; Ocean Jurisdictions, Law of the Sea, and International Relations; Development and Management of Ocean Resources; and Areawide Planning and Management. Emphasis is placed on the economics of ocean space and on the role of science in governmental and industrial decision making. Topics of special current interest include marine biological diversity, the quality of marine habitats and marine reserves, and the impacts of sea-level change. Other research interests are also appropriate.

Fellowships are awarded for one year with a stipend of \$28,500 plus group health insurance and a modest research budget. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by January 15, 1989 for 1989-90 awards. Awards will be announced in March. Write for application forms to: Dean of Graduate Studies, P.O. Box S, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543

Equal Opportunity/Affirmative Action Institution

RESEARCH MANAGER, NEUROPHYSIOLOGY

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in neurophysiology at the cellular and molecular level. The sponsored research is conducted principally at universities and private laboratories, with research performed by leading scientists in the field. This is a Civil Service position at the GM-13, 14 or 15 level (\$39,501-\$71,377), depending on qualifications.

The individual selected will establish goals for and conceive, organize and direct research and development programs in new areas of physiology with emphasis on molecular responses to environmental stimuli at the level of the central nervous system and other regulatory systems of the body. The incumbent will identify new research opportunities, communicate ONR interests to the scientific community, evaluate and select research proposals for funding, manage available resources, and represent the program within the Navy and DoD. An important aspect of this position is to conceive, develop and market new research ideas to higher Navy management. This position provides the challenge and opportunity to have a creative and significant impact on the direction and quality of research conducted at the national level. Additionally, the opportunity exists to establish or maintain an individual research program at an academic institution or government laboratory.

Applicants must have either (1) a Ph.D. or equivalent in physiology, neurochemistry, endocrinology, pharmacology, cell biology, molecular biology or a related discipline and at least one year of professional experience or (2) acquired a minimum of three years of progressively responsible professional experience. Demonstrated research experience is preferred.

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

OFFICE OF THE CHIEF OF NAVAL RESEARCH

Civilian Personnel Division, OCNR Code 01242P Attn: Announcement #88-72 (S) 800 North Quincy Street Arlington, VA 22217-5000

Applications will be accepted through 30 December 1988 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

U.S. CITIZENSHIP REQUIRED • AN EQUAL OPPORTUNITY EMPLOYER

WYETH-AYERST LABORATORIES Continued commitment to future growth and excellence in the pharmaceutical industry.

Wyeth-Ayerst Laboratories is one of the most well-recognized pharmaceutical research companies in the country. We were founded over 125 years ago in Philadelphia. Today with over 6,000 employees, Wyeth-Ayerst maintains several facilities in the greater Philadelphia area including our Clinical Research and Development headquarters in Radnor, PA.

We are currently experiencing a period of unprecedented growth within our CR&D function. American Home Products, the parent corporation of Wyeth-Ayerst, has made a major corporate commitment to this expansion. This has resulted in the creation of a number of medical research related positions at all levels.

ASSISTANT DIRECTOR/ CLINICAL SCIENCE

Ideal candidate will have a PhD in clinical science or a PharmD degree with 3-5 years relevant experience, highly specialized knowledge of clinical/preclinical science, the ability to solve highly technical problems and excellent communication skills. Major responsibility will be to assist the Medical Monitor in administrative and technical planning according to the clinical development objectives.

SENIOR CLINICAL SCIENTIST

Ideal candidate will have PhD in clinical science or a PharmD degree with 2-3 years relevant experience in several therapeutic areas, e.g., reproductive, endocrinology, cardiovascular electrophysiology, laboratory and/or invasive drug trials, problem solving and communication skills. Major responsibility will be to coordinate and organize clinical monitoring activities at Radnor in conjunction with the Regional Clinical Associates and Clinical Research Officers worldwide.

CLINICAL SCIENTIST II

Ideal candidate will have a Bachelor's degree with 4-5 years clinical research experience, or Master's degree with 1-2 years relevant experience, ability to solve complex problems and excellent communication skills. Major responsibility will be to conduct clinical investigational trials including reviewing preclinical/clinical data, maintaining documentation and evaluating results.



If your goals match our commitment to expansion, we want to talk with you about advancing tomorrow's state-of-the-art as part of our professional team. Forward your CV/resume in confidence to: **CR&D Personnel, Wyeth-Ayerst Laboratories, PO. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V responses encouraged.

POSTDOCTORAL RESEARCH POSITION MOLECULAR MECHANISMS OF MAMMALIAN CELL GROWTH CONTROL MAYO CLINIC/MAYO FOUNDATION

Postdoctoral position available 1 January 1989 to study the molecular and cellular biology of peptide growth factors. Specific areas of research include the identification and cloning of growth factor-regulated genes and the delineation of specific protein-DNA inter-actions involved in transcriptional control. Applicants should possess a strong background in one or more of the following areas: recombinant DNA methodology; protein biochemistry; mammalian cell culture techniques. Send curriculum vitae and three references to: Dr. Michael J. Getz, Department of Biochemistry and Molecular Biology, Mayo Clinic/Mayo Foundation, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution

RECEPTOR BIOLOGIST/BIOCHEMIST

Cephalon, Inc., a neuroscience-biotechnology compareceptor expression and/or experience with neural growth factor receptors would be a strong plus. Send curriculum viace to: Cephalon, Inc., 145 Brandywine Parkway, West Chester, PA 19380.

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

RESEARCH ASSOCIATE: Ph.D. in biological sciences with postdoctoral or work experience with animal models for studying cardiovascular physiology, microcirculation, and/or oxygen transport. Position involves supervision of contract program to evaluate synthetic oxy-gen carriers. Appointment will be in a cardiovascular surgical research laboratory at The Johns Hopkins Uni-versity School of Medicine. Send curriculum vitae and description of research experience to: **Timothy J. Gard** ner, M.D., Department of Surgery, The Johns Hop-kins Hospital, Blalock 618, Baltimore, MD 21205. Johns Hopkins is an Affirmative Action/Equal Opportunity . Emplover

RESEARCH ASSOCIATE, spring 1989 to investi-gate the role of sex steroids in bone cell biology. Postdoc-toral experience in molecular biology and cell culture needed for collaboration with a group of endocrinolo-gists/cell biologists. Appointment 1 to 3 years. Academic rank for salary (\$23,000 to \$28,000) depend upon experience. Send curriculum vitae and letters of reference to: Dr. Eric Orwoll, Oregon Health Sciences Univer-sity (L346), 3181 Sam Jackson Park, Portland, OR 97201. OHSU is an Equal Opportunity Employer.

RESEARCH ASSOCIATE (Biochemical Pharmacology) this individual will conduct research in a labora-tory of biochemical pharmacology. He/She will be responsible for planning and carrying out experiments to elucidate the role of various second messengers in cellular functions of brown adipose tissue. In addition, this individual will also supervise the research activities of a research assistant and teach laboratory techniques to graduate students. Seven years of college with Ph.D. graduate students. Seven years of conege with Ph.D. degree and 2 years of experience in related occupation as research associate. The 2 years of experience shall include research in catecholamines, phosphoinositides and calci-um metabolism. It shall also include work in cell isolation techniques, gas chromatography/mass-spectrometry and the measurement of specific secondary messenger sys-tems such as calcium phosphoinositides and archidon. tems; such as calcium, phosphoinositides and arachidon tems; such as calcium, phosphoinositides and arachidon-ic acid. Basic 40 hours per week (9 a.m. to 5 p.m.); salary at \$1916 per month. Send résumé: MESC, 7310 Woodward, Room 415, Detroit, MI 48202. Refer-ence no. 58188. Employer-paid ad.

POSITIONS OPEN

RESEARCH ASSOCIATE

The pharmacology section, Division of Hematology-Oncology, Department of Pediatrics, University of Cali-fornia, Childrens Hospital of Los Angeles, is recruiting a research associate to join an active program investigating the molecular biology and expression of human deoxycy-tidine kinase in relation to drug resistance. The candidate must have a Ph.D. or equivalent degree in biochemistry or molecular biology and 2 years of postdoctoral research experience on enzyme purification and gene cloning and expression. Excellent new laboratory facilities are available. Send curriculum vitae, a statement summarizing your research experience, and the names of three references to: Dr. John Holcenberg, Division of Hematol-ogy-Oncology, Childrens Hospital of Los Angeles, P.O. Box 54700, Los Angeles, CA 90054-0700. An Equal Opportunity Employer

RESEARCH ASSOCIATE position is available in the Department of Chemistry for a Ph.D. in biochemis-try/biophysics with previous research experience in the use/development of antibodies, human cell culture, and fluorescence techniques (fluorescence photobleaching, microscopy). The successful candidate will conduct independent research related to characterization of differentiation-dependent cell surface receptors in human promyelocytes.

Salary: \$20,000 plus benefits. Send curriculum vitae, list of publications, and names of three referees to:

Martha Harley Employee Relations Officer The University of Western Ontario Stevenson Lawson Building, Room 262 London, Ontario N6A 5B8

In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada. An Equal Opportunity Employer.

RESEARCH ASSOCIATE/ASSISTA

Small lab, top science, Salt Lake City, needs diligent, resourceful, independent person for maintenance, stock keeping, assays, DNA analysis/sequencing, participation in science: all or part. Basic research is on regulation of transcription in prokaryotes. Education in biochemistry and genetics essential. Hours and pay adjustible. Telephone: 801-581-8347

RESEARCH ASSOCIATE/BIOCHEMIST OR CELL PHYSIOLOGIST—The University of Pennsyl-vania, School of Medicine. Unique opportunity to inter-act with a multidisciplinary group for the study of lipid peroxidation in a model of ischemia-reperfusion injury. The position requires a flexible individual who can work independently, but interacts well with others. Experience with lipid analysis, HPLC, or isolated organ perfusion would be helpful, but not essential. The position offers a competitive salary and fringe benefits with ample research funding for 5 years. Applicants should submit curriculum vitae and names of three references to: Dr. Aron B. Fisher, Director, Institute for Environmental Medicine, University of Pennsylvania, 1 John Morgan Building, 36th and Hamilton Walk, Philadelphia, PA 19104–6068. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

RESEARCH TECHNICIAN

To be responsible for the maintenance of over 200 human cell lines; use the skilled sterile techniques that require familiarity with other molecular biological techniques; have liaison with senior research personnel and other medical researchers both within the United States other medical researchers both within the United States and abroad; to \$20,000 per year, commensurate with experience. M.S. in nutrition and food sciences required. Send résumé to: Darwin J. Prockop, M.D., Ph.D., Director and Chairman, Department of Biochemis-try, Thomas Jefferson University, Philadelphia, PA 19107. Equal Opportunity/Affirmative Action Employer.

Louisiana State University (LSU) Eye Center is look-ing for a **SENIOR PHARMACOLOGIST**. Applicant should be interested in drug delivery systems although other areas of research will be considered. Previous experience in ophthalmology not necessary. Interested applicants send curriculum vitae to: Herbert E. Kaufman, M.D., LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, LA 70112. LSUMC is an Equal Fundowner Opnortunity/Affinative Action Employee Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN

SCIENTIFIC POSITION, Brookhaven National Laboratory. Applications are invited from Ph.D.'s in genetics, biophysics, or cell biology to participate in the development of a program in cellular radiobiology and cytology. A primary project will involve in vitro/in vivo studies on biological effects on various forms of ionizing radiation delivered at low doses/dose rates. The position will be filled at the junior staff or research associate level depending upon the qualifications and experience of the successful candidate. Candidates should submit curriculum vitae and names

of three references to: Dr. V. P. Bond, Medical Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973. Equal Opportunity Employer M/F.

Stanford University seeks a distinguished SENIOR PALEOANTHROPOLOGIST with expertise in the last 300,000 years of human evolution to provide leader-ship for a new Program in Human Biocultural Evolution ship for a new Program in Human Biocultural Evolution within the Anthropology Department and to teach in the Human Biology Program. For more information, con-tact: Dr. William Durham, Department of Anthro-pology, Stanford University, Stanford, CA 94305– 2145. Application deadline is 1 December 1988. Stanford is an Affirmative Action/Equal Opportunity Employer.

SENIOR STAFF INVESTIGATOR

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

STAFF SENIOR SCIENTIST/ACCELERATOR PHYSICS: Act as group leader of multidisciplinary team (physicists, mechanical and electrical engineers, technicians) in project aimed at design, development, and prototyping of all CEBAF beam instrumentation. Develop beam current, profile, position and subpicosecond beam bunch length measuring gear. Develop overall design, strategy, and procedures to measure all relevant machine transport properties to include matrix elements, cavity phasing, emittance, energy, and energy spread. Devise polarization transport optics and manipulation. Forty hours per week; 8:00 a.m. to 5:00 p.m.; \$73,800 per year. Ph.D. in physics and 5 years of experience in job or 5 years of research experience in accelerator physics, with emphasis on instrumentation. Prior experience must include multi GeV electron/positron accelerator systems, beam instrumentation, low frequency electromagnetics, beam instrumentation, low frequency electromagnetics, microwave devices, synchotron light and laser scattering techniques and polarization transport. Will supervise four persons. Mail or hand carry résumé with copy of ad attached to: M. J. Hotchkiss, VEC, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502. J.O.# VA8100522.

STAFF SCIENTIST-ACCELERATOR PHYSICS: Design, production, installation, and commissioning of the rf separator system to be used to extract the beam and perform critical beam parameter measurements. Perform the detailed theoretical calculations necessary to specify the hardware, specify and perform the rf measurements necessary to ensure that the hardware meets or exceeds the required design criteria. Lead efforts to install, com-mission, and operate the system. Develop the schedule and budget and lead a team to successfully complete the task on time and within budget. Forty hours per weck; 9:00 a.m. to 5:00 p.m.; \$46,000 per year. Five years of experience in job or 5 years of experience in accelerator physics to include rf calculation and measurements. Prior experience must include leadership of hardware projects for accelerators, from conception through calculations, design, lab testing, final design, and commissioning. Will supervise three to ten persons. Mail or hand carry résumé with copy of ad attached to: M. J. Hotchkiss, VEC, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502. J.O.# VA8100429.

Scientist/ Sr. Scientist

Lead a group dedicated to developing and refining prokaryotic hosts and vectors for expression of recombinant proteins. This group will work closely with the Fermentation Group of our Process and Product Development Department. You should possess a PhD in Molecular Biology or related discipline, or extensive relevant background. Expertise in gene <u>E. coli</u> expression and manipulation required; knowledge of other prokaryotic systems a plus.

Cal Bio offers a stimulating work environment and a competitive compensation and benefits program. For immediate consideration, please forward your resume and three letters of reference to: Liza Mingione, California Biotechnology Inc., Human Resources, MS-S1104, 2450 Bayshore Parkway, Mountain View, CA 94043. We are an equal opportunity/ affirmative action employer.

CAL**₿**BIO

COLBY COLLEGE

PLANT MOLECULAR BIOLOGISTS

for a tenure-track position as Assistant Professor or Associate Professor of Biology. This position may include appointment to an endowed chair. Candidates should have a Ph.D., a strong commitment to undergraduate education, broad training and interest in the botanical sciences, and special interest and expertise in the molecular aspects of plant biology. Familiarity with liberal arts colleges, teaching experience, and/or post-doctoral training are desirable. Responsibilities will include teaching in introductory courses and in advanced courses in the successful candidate's areas of specialization. An active research program, including supervision of under-graduate research, will be expected. Submit letter of application, statement of teaching and research interests, curriculum vitae, reprints of publications, undergrad uate and graduate transcripts, and the names and addresses of three individuals who could serve as references to: Professor Arthur K. Champlin, Chair, Department of Biology, Colby College, Waterville, ME 04901. Completed applications should be received by 15 December 1988. Colby College is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.

Director Statewide Air Pollution Research Center University of California, Riverside

The University of California invites nominations and applications for the Director of the Statewide Air Pollution Research Center (SAPRC), a multi-campus research unit located on the Riverside campus. SAPRC, the recent recipient of a substantial endowment, has a staff of 50 scientists, technicians and faculty who teach and conduct basic and applied research in selected areas of air pollution.

The Director reports to the Chancellor of the Riverside campus. An outstanding record in research, administration and public service, and a Ph.D. or equivalent degree in either natural sciences or engineering is required. The candidate should be eligible for appointment at the full professor level with tenure in an appropriate department. The Director is also expected to establish an active program in atmospheric science or air pollution research and to participate in graduate training in his/her home department or in the interdepartmental graduate program in Environmental Toxicology.

Qualified women and minority candidates are particularly encouraged to apply. Salary is commensurate with experience.

Nominations and applications, accompanied by a curriculum vitae, a list of publications, recent reprints, statement of research interests, and names and addresses of four referees, should be sent by January 1, 1989, to:



Professor Roy Fukuto Chair of the Search Committee Office of the Chancellor University of California Riverside, CA 92521

An Equal Opportunity, Affirmative Action Employer.

Postdoctoral Positions

The Monsanto Corporate Research Laboratories Biophysical Sciences group has two postdoctoral openings at its Life Sciences Research facility located in surburban St. Louis. Scientists in this group work in the fields of protein characterization and separation, macromolecular crystallography, interactive molecular modeling and molecular spectroscopy. The group is currently working on a number of projects in the areas of health care, animal nutrition and plant science.

Electrophoresis

Candidates must have a Ph.D. in biochemistry and proven ability in the area of protein characterization using electrophoresis techniques. Preference will be given to those candidates with experience in other bioanalytical or biophysical techniques. The electrophoresis laboratory is equipped with a state-of-the-art imaging system, and is currently developing novel techniques for the identification, isolation and characterization of proteins.

Protein Crystallography

Candidates must have a Ph.D. in a relevant discipline. Preference will be given to those candidates who have a background in protein crystallography and interest in learning genetic engineering techniques. The crystallography and molecular modeling laboratories are equipped with two Rigaku 12 KW rotating anode X-ray generators with one AFC5 single counter diffractometer and a dual chamber area detector system with a dedicated computer. Computing facilities include two VAX 11/780 computers with three Evans $\mathcal E$ Sutherland PS300 graphics terminals, and an FPS-264 array processor. Further expansion of our facility to include an additional dual chamber area detector system should be completed within one year.

Interested candidates should send their resume and three letters of recommendation to: MONSANTO COMPANY; BB5B-PS; 700 Chesterfield Village Parkway; St. Louis, MO 63198. Equal Opportunity Employer M/F/H/V.

Monsanto

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY THE UNIVERSITY OF ALBERTA

SPEECH-LANGUAGE PATHOLOGIST: A tenure-track position is available 1 July 1988 at the rank of assistant professor. The applicant must hold a Ph.D. degree in speech-language pathology or related discipline and specialize in child language disorders. Specific inter-est in the language disorders of school-aged children is preferable. Proven research and university teaching abili-uate activity and matricesting but the American Speech ty are required and certification by the American Speech-Language-Hearing Association is desirable. Salary will be commensurate with qualifications (annual minimum of \$32,564).

The deadline for receipt of applications is 15 November 1988. The Department of Speech Pathology and Audiology is planning a major expansion in graduate programs, and will have a significant increase in facilities, particularly for teaching and resaerch, upon renovation of recently allocated space. Please apply by sending curriculum vitae, names of three referees and a statement of teaching and resarch interests to:

Martha Piper, Ph.D. Dean, Faculty of Rehabilitation Medicine 316 Corbett Hall University of Alberta

Edmonton, Alberta, Canada T6G 2G4

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

VETERINARY MICROBIOLOGISTS. The De-partment of Veterinary Microbiology and Pathology, Washington State University, seeks two veterinary microbiologists for full-time, tenure-track appointments. Both positions require the Ph.D. degree and expertise in infectious disease research, and offer 50% time for research. One position (closing date 21 January 1988) carries a 50% time for commitment in public health and bacteriology, so that advanced training in public health is required, and the D.V.M. (or equivalent) degree and ACVM certification are preferred. The other position (closing date 31 March 1989) has a 50% diagnostic bacteriology service appointment to the Washington Animal Disease Diagnostic Laboratory, and requires the D.V.M. (or equivalent) degree, ACVM certification and experience in diagnostic bacteriology. The successful candidates will be expected to develop extramurally supported research programs in areas complementary to existing departmental programs. Rank and salary will be commensurate with training and experience. Send curric-ulum vitae and names of three references to: Dr. P. R. Widders, Department of Veterinary Microbiology and Pathology, Washington State University, Pull-man, WA 99164-7040.

WSU is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply.

VICE PRESIDENT OF DEVELOPMENT

Vice President of Development for new company in cardiovascular medicine. Doctoral degree and scientific training in biological or pharmaceutical sciences re-quired. Must be experienced in developing and manag-ing preclinical and clinical programs. Requires hands-on participation in all phases of development process. Excellent equity opportunity for energetic individual to help create a company with significant impact in a rapidly growing area of health care. Send résumé to: Cholestech Corporation, 3100 Diablo Avenue, Hayward, CA 94545.

CONFERENCES

IMPACT OF CARDIAC SURGERY ON THE QUALITY OF LIFE-NEUROLOGICAL AND **PSYCHOLOGICAL ASPECTS**—28, 29 and 30 March 1989, New York Hilton, New York. Co-sponsored by: International Consortium for the Study of Neurological and Psychological Reactions to Cardiac Surgery, Long Island Jewish Medical Center and the University of Hamburg. Papers are now being solicited for the sessions. Credits: 17 hours Category 1 ACCME. Information: Office of Continuing Education, Long Island Jewish Medical Center, New Hyde Park, NY 11042; telephone: 718-470-8650.

POSITIONS OPEN

SYSTEMS PROGRAMMER. The Genetics Computer Group (GCG) at the University of Wisconsin, Biotechnology Center, is seeking a person with an M.S. in computer science or equivalent and an interest in molecular biology. This individual will build new application programs for the GCG sequence analysis software package in the VAX/VMS environment based on published and original algorithms. Coding style and careful system design maintain the integrity of this package which is developed in response to the needs of the international molecular biology community. Initial training period will include technical support to familarize the new program-mer with the GCG package. Send résumé to: Genetics Computer Group, UW Biotechnology Center, 1710 University Avenue, Madison, WI 53705.

COURSE

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION 20 to 25 February 1989

This course will consist of lectures in methodology with comprehensive syllabus covering in receptors, gene transcription, mRNA and protein synthesis, recombi-nant DNA, protein hormones, and cyclic nucleotides. Co-Directors: M. R. Hughes and B. W. O'Malley Fee: \$365 (\$245: fellows and students).

For further information contact:

Bonnie Cuthber Department of Cell Biology Baylor College of Medicine Telephone: 713-799-6200 Deadline: 29 January 1989

FELLOWSHIPS

The California Institute of Technology, Division of Engineering and Applied Science, invites applications for

THE MYRON A. BANTRELL POSTDOCTORATE FELLOWSHIP FOR SCIENTIFIC AND ENGINEERING RESEARCH Restricted to U.S. and Israeli citizens

The fellowships are restricted to United States and Israeli citizens and are intended for those who have just completed their Ph.D. They can be in any field of research pursued within the Division of Engineering and Applied Science. No individual field has priority. The duration of the fellowships is typically 1 year beginning in the fall or winter of 1989.

The fellowships carry a competitive stipend, a \$1,000 research grant, and one-way travel expenses to Pasadena. To apply, candidates should submit curriculum vitae, bibliography, copies of selected publications, and a state-

ment describing his or her research interests. Candidates should also arrange to have three letters of recommenda-tions sent directly to:

Paul C. Jennings, Chairman Division of Engineering and Applied Science California Institute of Technology Pasadena, CA 91125

The deadline for completed applications is 9 January 1989.

The Institute is an Equal Opportunity/Affirmative Action Employer and welcomes applications from women and min ities.

C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIPS

In diabetes research, molecular endocrinology, molec-ular biology, differentiation, reproductive biology, im-munology, structure and function of membranes or lipid metabolism. Tenable in the Banting and Best Depart-ment of Medical Research for 2 years after 1 July 1989 with a competitive stipend. Available to new Ph.D.'s or candidates with less than 2 years of postdoctoral training by 30 June 1989. Send curriculum vitae, transcripts, and three letters of reference, preferably before 30 November 1988 to: Dr. Arnis Kuksis, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Canada M5G 1L6.

AWARDS

FIBROMYALGIA RESEARCH AWARDS

The Southern California Chapter of the Arthritis Foundation is instituting research awards of up to \$50,000 each to support an M.D.(s) or Ph.D.(s) con-ducting research relevant to fibromyalgia (fibrositis). ducting research relevant to hbromyalgia (hbrositis). Areas include epidemiology, exercise physiology, immu-nology, pain management, patient/public/professional education, psychology, neurochemistry, genetics, sleep mechanisms, virology, and the application of NMR spectroscopy. P.I. must be affiliated with an academic institution, hospital or industry in the chapter area, however, collaborative arrangements are allowed and research may be conducted elsewhere. Deadline is 6 January 1989. Contact:

Arthritis Foundation 4311 Wilshire Boulevard Los Angeles, CA 90010 Attention: Medical Department Or telephone: 213-938-6111

MEYER ARTHRITIS INVESTIGATOR AWARD

The Southern California Chapter of the Arthritis Foundation will offer the George L. N. and Edna Z. Meyer Arthritis Investigator Award to an outstanding young investigator (M.D. and/or Ph.D.) conducting research in the rheumatic diseases. The award provides support during the period between completion of post-doctoral training and establishment as an independent investigator. The award in the amount of \$30,000 will be made for 1 year beginning 1 July 1989. Research conducted during the award period must be done in the Southern California Chapter area or may be done by a southern California investigator in another area provided he/she returns to southern California. Deadline is 14 January 1989.

For applications write:

Arthritis Foundation Medical Department 4311 Wilshire Boulevard Los Angeles, CA 90010 Or telephone: 213-938-6111

FELLOWSHIPS

FELLOWSHIPS are available for pre- and postdoc-toral study in the PHARMACOLOGY GRADUATE PROGRAM of the Grace Cancer Drug Center, Roswell Park Memorial Institute, a Graduate Division of the State University of New York at Buffalo. Stipends and tuition waivers are available for eligible candidates. The program offers diversified training related to the pharmacological, molecular and biochemical basis for drug action with emphasis on cancer therapeutics. Specific areas include: cellular differentiation and growth regula-tion; cellular ultrastructure; oncogenes; drug resistance; immunopharmacology and metabolic regulators; inhibition or alteration of nucleic acid; protein and membrane components; pharmacokinetics and drug metabolism; mechanisms of carcinogenesis; genetic basis for drug action; preclinical and clinical pharmacology; medicinal chemistry and toxicology. U.S. citizens and permanent residents may send applications to:

E. Mihich, M.D., Chairman Graduate Pharmacology Program Roswell Park Memorial Institute Grace Cancer Drug Center Elm and Carlton Streets Buffalo, NY 14263

Please include curriculum vitae and indicate two references. An Equal Opportunity/Affirmative Action Employer.

PREDOCTORAL FELLOWSHIPS are available for studies leading to the Ph.D. in the Physiology Graduate Program in the Temple University School of Medicine. Stipends and tuition waivers are available for eligible candidates. Specific research topic areas include cell biology of normal and diseased myocardium, membrane receptors, developmental cardiopulmonary physi-ology, liquid ventilation, underwater medicine, mem-brane transport, gastrointestinal function, vascular smooth muscle, chemoreceptor function, and control of microcirculation. Applications may be sent to: Steven R. Houser, Ph.D., Director, Physiology Graduate Pro-gram, Box 100, Temple University School of Medi-cine, 3420 North Broad Street, Philadelphia, PA 19140. An Equal Opportunity/Affirmative Action Employer, M/F

LABORATORY OF BIOCHEMICAL RISK ANALYSIS PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

FELLOWSHIP POSITIONS AVAILABLE

Postdoctoral positions are available in the Laboratory of Biochemical Risk Analysis of the Division of Biometry and Risk Assessment, NIEHS, located in Research Triangle Park, North Carolina. We are recruiting in each of the following areas:

Studies of polymorphisms of cytochrome P-450 and drug metabolism in rodents and humans using recombinant DNA techniques. Studies involve construction and sequencing of cDNA and gene libraries, site specific mutagenesis and transfection experiments.

The use of human lymphocytes as a means of evaluating exposure to chemicals and for identifying individuals at risk. Current studies include methods for quantifying drugmetabolizing enzymes, DNA adducts and gene mutations.

Estrogen-stimulated growth and neoplasia of mammary gland epithelium as part of a program investigating risk factors of human breast cancer. Studies include the role of DNA adducts and gene defects in mammary gland preneoplasia.

The initial appointment is for two years with extensions possible for up to 5 years for the talented researcher. Applicants should possess a Ph.D. or equivalent degree in Genetics, Molecular Biology, Biochemistry or closely related field and less than 4 years of postdoctoral experience. Should be a U.S. citizen. Salary range is \$20,000 - \$38,753 per year.

For additional information, contact Bruce Wiggins or Lisa King at (919) 541-3317. To apply, send Curriculum Vitae and names, addresses and telephone numbers of three references by December 1 to:



Bruce Wiggins (Code HNV-65) NIEHS Personnel Office P.O. Box 12233 Research Triangle Park North Carolina 27709

AN EQUAL OPPORTUNITY EMPLOYER

POSTDOCTORAL FELLOWS DEVELOPMENTAL GENETICS

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel pharmaceuticals. We have recently established a Molecular Biology Department to study the molecular basis of human cancer. We are offering Postdoctoral Fellowship positions to study developmental genetics.

You will conduct basic research in a laboratory focused on the regulation and expression of oncogenes, growth factor receptors during development of the mouse. This involves expression of these genes in transgenic mice (in the pancreas or in germ cells); as well as mapping the developmental pattern of gene expression in normal and various genetic mouse mutants using in situ hybridization.

Qualified candidates should have experience in molecular biology, however, individuals with experience in mouse genetics and development will be considered.

This position is based in Princeton, New Jersey, a pleasant semi-rural community located mid-way between New York City and Philadelphia. For consideration please submit curriculum vitae to: The Squibb Institute for Medical Research, Human Resources Department 25, PO. Box 4000, Princeton, N.J. 08543-4000. An equal opportunity employer.



POSTDOC OR RESEARCH ASSOCIATE Monoclonal Antibody Development

Cetus Corporation, a front runner in the field of biotechnology, seeks a highly qualified Postdoc or Research Associate to develop human monoclonal antibodies for research and therapeutic applications.

The successful candidate will join our Department of Immunology and will interact in a stimulating, scientific environment with new, well-equipped laboratories.

The position requires a Ph.D or Masters Degree in immunology/cell biology/biochemistry or related areas plus a familiarity with techniques for immunization, fusion, hybridoma screening and antibody purification and characterization. Preference will be given to applicants with prior experience in generating human monoclonal antibodies to viral epitopes.

Cetus offers excellent salaries and benefits plus the opportunity to support some of the most interesting scientific research in the Bay Area. For confidential consideration, please send your resume to: Cetus Corporation

Box BKG 1400 Fifty-Third Street Emeryville, CA 94608

We are an Equal Opportunity Employer.





- Research at national laboratories
- Stipends \$19–35,000 depending on degree, program, research area
- Recent graduate degree
- •U.S. citizens or PRAs eligible
- Information



Postgraduate Research Programs University Programs Division Oak Ridge Associated Universities P.O. Box 117, Oak Ridge, TN 37831-0117 (615) 576-3190

NEUROPHARMACOLOGIST

As a \$4.4 billion worldwide leader in the health care industry, Abbott Laboratories is committed to advanced technology. Our level of R&D funding has kept us on the leading edge of scientific discovery and you could make an important contribution in the area of molecular neuropharmacology by joining our interdisciplinary neuroscience team.

The Neuroscience Research Division, a segment of the Pharmaceutical Products Division, seeks a well-trained scientist to work towards the discovery of novel pharmacological agents for diseases of the nervous system through the study of neuronal mechanisms of regulation. The successful applicant will have a PhD in one of the life sciences and a record of productive post doctoral research. Experience with neurotransmitter receptors and transduction mechanisms is essential.

Located in an attractive suburban area just 30 miles north of Chicago, Abbott provides competitive salaries and exceptional benefits including profit sharing and stock retirement plans. For confidential consideration, please send your resume to: **Patricia Handy, Corporate Placement, Dept. SCI/11-4, Abbott Laboratories, Abbott Park, IL 60064.** Abbott is An Affirmative Action Employer.



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Worldwide 1888-1988

MOLECULAR BIOLOGIST

SIGMA CHEMICAL COMPANY employs hundreds of staff personnel at our St. Louis laboratory and manufacturing headquarters. Our biochemicals, diagnostic kits and reagents are distributed to a quality conscious international market that relies upon our integrity and professionalism. Excellent opportunities exist for individuals in:

MICROBIAL CULTURE COLLECTION

MANAGEMENT, fermentor operation (large and small scale), fermentation optimization and scale-up, or large scale cell culture.

BIOCHEMIST, genomic cDNA library construction and screening, DNA sequencing, nucleic acid hybridization, large scale nucleic acid purification, glycoproteinanalysis, or protein purification.

Both positions require a degree in the sciences and some previous experience in the above areas.

SIGMA can provide a competitive salary and a full company-paid benefits package. Please send your resume to:

Personnel Manager (CAM) SIGMA CHEMICAL COMPANY P.O. Box 14508 St. Louis, MO 63178

An Equal Opportunity Employer



Chairperson Department of Medicine

The University of Massachusetts Medical Center in Worcester MA is seeking candidates with outstanding accomplishments in medical research and education. The Medical Center, the Commonwealth's only public academic health center, consists of a School of Medicine, graduate schools of Biomedical Sciences and Nursing, and a 365-bed University Hospital. The Department of Medicine of the School of Medicine has 17 divisions with 96 full time faculty positions. Its research activities have grown significantly during the past several years. There is a large clinical case load with major teaching responsibilities for medical students, residents, and fellows. The Medical Center, near the end of its second decade, has committed itself to a series of major advances in its clinical care, teaching, and research programs. Toward these ends, it is firmly committed to the continued growth of the Department of Medicine.

Nominations and applications, including curriculum vitae, should be forwarded to Aaron Lazare, MD, Chairman, Medicine Search Committee, Department of Psychiatry, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester MA 01655. Women and minorities are encouraged to apply. UMMC is an equal opportunity/affirmative action employer.

UNIVERSITY OF MASSACHUSETTS MEDICAL NATIONAL CANCER INSTITUTE National Institutes of Health, Public Health Service

CANCER PREVENTION FELLOWSHIP PROGRAM (CPFP)

The DIVISION OF CANCER PREVENTION AND CONTROL (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The primary purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control research. The program provides for : participation in the DCPC Cancer Control Academic Program (a formal four-month course in cancer prevention and control); 20 months at NCI working directly with individual preceptors on ongoing cancer prevention and control projects; and, one year at a DCPC-approved cancer control program or State Health Department (may be optional). Funding permitting, up to 10 Fellows will be accepted for up to three years of training, beginning August 27, 1989.

APPLICANTS MUST (BY THE DEADLINE):

- Possess an M.D. or D.O. degree from a U.S., territorial, or Canadian medical school OR foreign medical graduates must have current ECFMG/FMGEMS certification and have completed one year residency in a training program approved by the Accreditation Council for Graduate Medical Education --OR-- Possess other accredited U.S., territorial, or Canadian doctoral degree (Ph.D., Dr. P.H., D.D.S., etc.) in a discipline related to cancer prevention and control research (biomedical, medical, nutritional, public health or behavioral sciences). Foreign doctoral graduates must provide documented evidence that the foreign education is comparable to doctoral education received in accredited institutions noted above;
- Possess U.S. citizenship or be a resident alien eligible for citizenship within four years;
- Complete and return the application packet by the deadline (including arranging for official academic transcripts and four current, original letters of reference to be sent directly by the academic institutions and referees to the CPFP Coordinator).

For questions concerning the program's scientific or administrative aspects, please contact Dr. Peter Greenwald or Mrs. Barbara Redding at (301) 496-8640. Application packets may be obtained by sending a POSTCARD with your name and home address to CPFP Coordinator, NIH/NCI/DCPC/CCAB, EXPS Terrace Level, 9000 Rockville Pike, Bethesda, MD 20892. Please do not send any material until after you have read the instructions in the application packet.

DEADLINE FOR RECEIPT OF APPLICATIONS: JANUARY 11, 1989 NIH is an Equal Opportunity Employer

ASSISTANT PROFESSOR

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

The successful candidate will be expected to establish and support an active research program using modern approaches to study contemporary biological issues, and to participate initially in teaching histology to medical students. Although no specific research experience is required, research strengths in the Department include cell, developmental, reproductive, radiation, bone and neurobiology. Applicants should have a PhD or MD degree, teaching experience in the anatomical sciences, post doctoral training, and a continuous record of research accomplishments. Persons interested in applying for the position, should send a detailed curriculum vitae, which includes a statement of research plans and the extent of exposure to Anatomical Sciences, and the names and ad-



dresses of three references by **December 15**, 1988 to Dr. Mark M.Black, Chairperson, Recruitment Committee, Dept. of Anatomy, Temple University School of Medicine, 3400 N. Broad St., Phila., PA 19140.

Temple is an affirmative action, equal opportunity employer.

Postdoctoral Position-Oceanographic Bioacoustics

Postdoctoral position available in Biology Department for Biologist with extensive training in marine acoustics and data telemetry and interest in using acoustic techniques to study zooplankton population structure. Ph.D. required with seagoing experience desired. Collaborative research with staff in other institution departments is encouraged.

Send resume with names of three professional references to:



SYNERGEN

A leading biotechnology company in Boulder, Colorado offers the opportunity to build scientific careers in a stimulating intellectual environment. There are currently openings for the following persons:

Protein Biochemist

We are seeking a Ph.D. in Physical Biochemistry or related field with 2-5 years in protein analysis and characterization. Primary responsibilities include the physicochemical characterization of protein drug candidates, and the design of effective delivery systems for topical and systemic administration.

Pharmaceutical Protein Chemist

We are seeking a Ph.D. in Pharmaceutical Chemistry or related field with 2-5 years in protein analysis and characterization. Primary responsibilities include the physicochemical characterization of protein drug candidates, and the design of effective delivery systems for topical and systemic administration. Collaboration with bioanalytical and process chemists, molecular and cell biologists will be expected in meeting the challenges of biopharmaceutical product development.

Synergen offers competitive salaries, generous benefits, and the financial stability required for future development. Please send a CV, bibliography, and references to:

> Recruitment Director 1885 33rd Street Boulder, CO 80301

FELLOWSHIPS

JAMES CLERK MAXWELL TELESCOPE FELLOWSHIP

As part of a collaboration between the British, Dutch, and Canadian governments and the University of Hawaii, there is a vacancy for a postdoctoral fellow or a visiting research fellow in millimeter and submillimeter astronomy. The successful applicant will be expected to undertake research with the James Clerk Maxwell Telescope (JCMT) sited on the summit of Mauna Kea. The JCMT Fellow will be based at the Institute for Astronomy of the University of Hawaii in Honolulu but will be expected to work with the team of British, Dutch, and Canadian astronomers at the JCMT base in Hilo. The successful candidate will enjoy the privileges of a staff member of the Institute for Astronomy, including access to the other telescopes on Mauna Kea. Scientists of any nationality who hold a Ph.D. and have a strong record of research in millimeter or submillimeter astronomy or in a closely related field are invited to apply. A postdoctoral fellowship will normally only be awarded to a candidate who received the Ph.D. degree no more than 3 years before the starting date of this appointment. A research fellowship will normally only be awarded to a candidate on temporary leave from his or her home institution. Applications should include curriculum vitae, a proposed program of research, and the names of three referees, and should be sent to: Dr. Adrian Webster, Joint Astrono-my Centre, 665 Komohana Street, Hilo, HI 96720. Telephone: 808-961-3756; telex: 633135, in time for receipt no later than 15 December 1988.

Tourette Syndrome Association, Inc. ANNOUNCES RESEARCH GRANTS AND FELLOWSHIPS

AVAILABLE				
Clinical Studies	\$	5,000	to	\$25,000 \$25,000 \$20,000
For application write: Tourette	S	yndroi	ne	Associa-

tion, 42-40S Bell Boulevard, Bayside, NY 11361. Letters of intent to apply due: 15 January 1989 and 15 July 1989.

PROGRAM

CARNEGIE MELLON UNIVERSITY

GRADUATE STUDY IN ENGINEERING AND PUBLIC POLICY (EPP): The EPP Graduate Program leads to a research-based Ph.D. specializing in policy issues in areas such as: telecommunication, computer and other information technologies; design and application of conventional and Al-based computer systems for policy analysis and decision support; mathematical modeling of energy and environmental systems; technical and economic issues of peace and international security; manufacturing and industrial policy; and risk analysis. Applicants must hold a bachelor's degree in engineering, physical sciences, or mathematics. Education or experience beyond the bachelor's degree is very desirable. Contact: Dr. Indira Nair, Engineering and Public Policy (07), Carnegie Mellon University, Pittsburgh, PA 15213.

SYMPOSIUM

CALL FOR POSTERS

The Center for Alternatives to Animal Testing at The Johns Hopkins School of Public Health is sponsoring its sixth international symposium: IN VITRO TOXI-COLOGY: NEW DIRECTIONS. This symposium will be held in Baltimore, Maryland on 4–5 April 1989. We encourage the submission of abstracts for poster presentations. Posters of academic endeavors and organizations offering products of importance to in vitro studies are encouraged.

If you wish to receive instructions for poster presentations or would like to be placed on the center's mailing list, please contact: Mrs. Jeannene Tylee, The Johns Hopkins Center for Alternatives to Animal Testing, 615 North Wolfe Street, Baltimore, MD 21205. Telephone: 301-955-3343.

Deadline for submission of poster abstracts—1 March 1989.

TRAINING PROGRAM

PREDOCTORAL AND POSTDOCTORAL TRAINING IN HUMAN CANCER BIOLOGY AT THE UNIVERSITY OF WISCONSIN

Applications are invited for graduate study toward the Ph.D. degree and for postdoctoral Traineeships in Human Cancer Biology. Financial assistance will be awarded on a competitive basis. *Postdoctoral Traineeships are restricted*

to U.S. citizens and those with permanent U.S. residence visas. Research areas include experimental pharmacology and cancer endocrinology, biological response modifiers and cancer immunology, biology and biochemistry of carcinogenesis and tumor promotion, and radiation biology. The Department of Human Oncology is the core department of the UWCCC, an NCI-designated comprehensive cancer center.

For information, write:

Chairman, Graduate Steering Committee Department of Human Oncology K4/330 UW Clinical Cancer Center 600 Highland Avenue Madison, WI 53792

The University of Wisconsin–Madison is an Equal Opportunity/Affirmative Action Employer.

The Basic Science Departments (Cell Biology and Neuroanatomy, Biochemistry, Microbiology, Pathology, Pharmacology, Physiology), Medical School, University of Minnesota, periodically have openings for **POST-DOCTORAL TRAINING.**

For information about possible openings in these programs, write, specifying department of interest, to: University of Minnesota Medical School

Box 293 UMHC 420 Delaware Street, S.E. Minneapolis, MN 55455

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The Institute of Neuroscience is a large, multidisciplinary group of principal investigators in which a variety of contemporary approaches are employed, including: neurochemistry, receptor and molecular biology, neurotransplantation, in vivo electrophysiology in anesthetized and awake behaving animals, brain tissue slice preparations, microiontophoresis, state-of-the-art neuroanatomy and steroid effects on brain function. Collaborative interactions are encouraged within the group. Previous experience in electrophysiology, neurochemistry, or neuroanatomy desirable. Salaries are competitive. Send résumé and statement of research interests to: Robin Appel, Administrative Coordinator, Institute of Neuroscience, Hahnemann University School of Medicine, Mail Stop 409, Broad and Vine Streets, Philadelphia, PA 19102. Telephone: 215-448-4326. Equal Opportunity Employer.

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