

Because of this complexity civilian leaders, with the exception of Jimmy Carter, have had little interest in the details of U.S. fighting plans and capabilities. This lack of interest has been encouraged by a military bureaucracy (specifically, the Strategic Air Command) that has been most reluctant to reveal details of U.S. nuclear war plans to civilian officials. The result is a civilian leadership ill-prepared to make the appropriate decisions in a nuclear crisis.

In his final chapter Lebow offers several suggestions, beyond those implicit in earlier chapters, for improving crisis management. Among them are improvement of early warning, arms control, preservation of the ABM Treaty, and alternatives to quick-launch strategies. I found this the weakest chapter in the book, particularly because of the absence of recommendations relating to force structure and targeting, matters the author had earlier identified as important to making nuclear crisis management possible. But even with this failing *Nuclear Crisis Management* is a valuable contribution.

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Pioneer Ecologist

Fraser Darling's Islands. J. MORTON BOYD. Edinburgh University Press, Edinburgh, 1986 (U.S. distributor, Columbia University Press, New York). xiv, 252 pp., illus. \$25.

Scientists are inclined to snub colleagues who indulge in popular scientific exposition, especially if they are successful at it. Many contemporaries of Sir Frank Fraser Darling, who died in his beloved Scotland in 1979 at the age of 76, were less than appreciative of his contributions to vertebrate natural history and to the international conservation movement. This affectionate portrait by J. Morton Boyd goes a long way toward setting the record straight.

Fraser Darling was a naturalist writer whose book *A Herd of Red Deer* broke new ground in field research on animal behavior. As a result of it, the red deer was to become a testing ground for modern theories of vertebrate social evolution. By Fraser Darling's own assessment, the most important outcome of the red deer project was to gain credence for extended study of groups of wild animals as a source of new insights in behavioral biology and to establish social behavior as a significant ecological factor. Another work, *Bird Flocks and the Breeding Cycle*, concerned with social influences on

breeding synchrony in gulls, was equally influential, though scientifically it proved to be on less secure ground. Another favored subject for island projects was the behavior of the gray seal. Then, as now, funding for long-term field studies of behavioral ecology was exceedingly difficult to obtain. Fraser Darling did get support from a Leverhulme Fellowship (the other recipient that year was Charles Elton), but mostly he paid his way by income from popular books about the delights and hardships of life with his family on uninhabited islands in northwestern Scotland, in pursuit of his animal subjects. Books like *A Naturalist on Rona* and *Island Years*, romantic in their sense of adventure and isolation and immensely evocative in their appreciation of nature at close quarters, played their part in drawing budding scientists, including Boyd and this reviewer, into field biology.

Fraser Darling had a deep appreciation for the sturdy qualities of the crofters of the Scottish Highlands and the Hebrides and became deeply concerned about their poverty and dwindling numbers. His *West Highland Survey: An Essay in Human Ecology* was a milestone in British environmental science. Pitted against the deep conservatism of the highlanders and the British civil service, the practical consequences of his ecological evangelism were few. According to Boyd, the words "wilderness" and even "national park" are anathema in the Highlands to this day. Internationally, however, Fraser Darling's work had some of the impact of the writings of Aldo Leopold and Fairfield Osborne, confronting problems of land use planning in a spirit not of exploitation but more of "wooing" of the environment. In fact, Fraser Darling got a better hearing on this side of the Atlantic than at home and quickly moved to the forefront of activities of the Conservation Foundation, in Washington, D.C. He also spent much time in Africa, the subject of another book Boyd plans to write. Fraser Darling was influential, for example, in conservation of the Ngorongoro Crater in Tanzania. Late in life his focus shifted back to Britain, where he gave the prestigious Reith Lectures and received a knighthood. The network of nature reserves throughout Scotland established and administered by the Nature Conservancy, an organization Fraser Darling helped to create, stands as a monument to his foresight.

Yet, these accomplishments notwithstanding, for many the true image of Fraser Darling is a more modest and personal one. As Boyd says, he saw himself "as an explorer in the middle ground between animal behavior and ecology and felt that he possessed something special in the philosophy of sci-

ence which most of his academically distinguished contemporaries did not have." By felicitous choice of quotations, including unpublished letters and notebooks, warm personal reminiscences, and eloquent accounts of pilgrimages to places where Fraser Darling lived and worked, Boyd has captured the essence of a biologist who fulfilled his own sense of destiny as a leader of contemporary thought on the awareness and care of nature.

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Reprints of Books Previously Reviewed

The Age of Birds. Alan Feduccia. Harvard University Press, Cambridge, MA, 1987. Paper, \$12.95. *Reviewed* 211, 1153 (1981).

The Ecology of Natural Disturbance and Patch Dynamics. S. T. A. Pickett and P. S. White, Eds. Academic Press, Orlando, FL, 1986. Paper, \$24.95. *Reviewed* 230, 434 (1985).

Revolution in Science. I. Bernard Cohen. Belknap (Harvard University Press), Cambridge, MA, 1987. Paper, \$9.95. *Reviewed* 229, 1077 (1985).

Books Received

The A-Z of Nuclear Jargon. Jonathon Green. Routledge and Kegan Paul (Methuen), New York, 1987. viii, 199 pp. \$34.95.

Adsorption Processes for Water Treatment. Samuel D. Faust and Osman M. Aly. Butterworths, Stoneham, MA, 1987. xii, 509 pp., illus. \$59.95.

Advanced Methods in Protein Microsequence Analysis. Brigitte Wittman-Liebold, Johann Salnikow, and Volker A. Erdmann, Eds. Springer-Verlag, New York, 1986. x, 423 pp., illus. \$79. Based on an advanced course and a symposium, Berlin, F.R.G., Sept. 1985.

Advances in Neurology. Vol. 45, Parkinson's Disease. Melvin D. Yahr and Kenneth J. Bergmann, Eds. Raven, New York, 1986. xxiv, 616 pp., illus. \$98.50. From a symposium, New York, June 1985.

Advances in Viral Oncology. George Klein, Ed. Vol. 6, Experimental Approaches to Multifactorial Interactions in Tumor Development. xiv, 174 pp., illus. \$63. Vol. 7, Analysis of Multistep Scenarios in the Natural History of Human or Animal Cancer. xii, 217 pp., illus. \$69. Raven, New York, 1986.

An Adventure in Multidimensional Space. The Art and Geometry of Polygons, Polyhedra, and Polytopes. Koji Miyazaki. Wiley-Interscience, New York, 1986. viii, 112 pp., illus. \$49.95. Translated from the Japanese edition (1983). Henry Crapo, Ed.

Cultural Models in Language and Thought. Dorothy Holland and Naomi Quinn, Eds. Cambridge University Press, New York, 1987. xii, 400 pp. \$49.50; paper, \$15.95.

Current Concepts in Craniofacial Anomalies. A Symposium in Honor of Joseph J. Bonner (Los Angeles, Aug. 1985). Michael Melnick, Ed. Liss, New York, 1986. x, 339 pp., illus. \$80. Also published as *Journal of Craniofacial Genetics and Development Biology*, Supplement 2, 1986.

Dark Matter in the Universe. J. Kormendy and G. R. Knapp, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xxx, 596 pp., illus. International Astronomical Union symposium no. 117 (Princeton, NJ, June 1985).

Decision Analysis and Behavioral Research. Detlof von Winterfeldt and Ward Edwards. Cambridge University Press, New York, 1986. xvi, 604 pp., illus. \$59.50; paper, \$19.95.

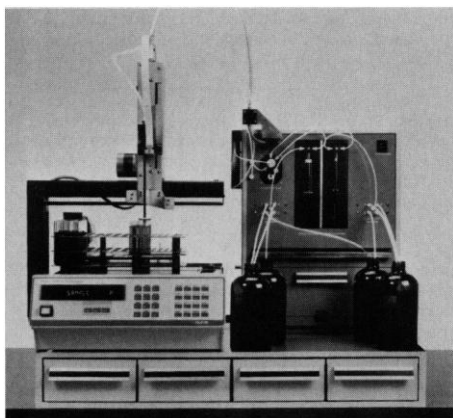
Decision Making About Decision Making. Meta-

(Continued on page 1362)

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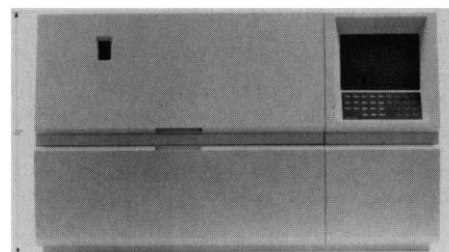
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Literature

100th Anniversary Catalog has 290 pages of bottles, centrifuges, desiccators, flasks, incubators, pumps, stirrers, vials, and other equipment for the laboratory. Wheaton Scientific. Circle 642.

Molecular Biologicals features 200 pages of enzymes, cloning vectors, nucleotides, nucleic acids, immunologicals, separation products, electrophoresis products, and other chemicals and equipment for molecular biology. Pharmacia, Molecular Biology Division. Circle 644.

The Choice is Easier than Ever is a 24-page brochure about high-performance liquid chromatography systems. Gilson Medical Electronics. Circle 646.

Catalog 1986/87 features restriction endonucleases, methylases, enzymes, phage DNAs, cloning and sequencing systems, primers, probes, cloning vectors, linkers, adapters, and reagents. New England Biolabs. Circle 647.

(Continued from page 1360)

models and Metasystems. John P. van Gigh, Ed. Abacus, Cambridge, MA, 1987. xxiv, 293 pp., illus. \$38. Cybernetics and Systems Series, vol. 7.

"Défroquer les Charlatans" au Sein du Corps Scientifique et Social. Jerry Hirsch and Jean Belkhir. Science Libre, Paris, 1987. 232 pp. Paper, 50 F.

A Desert Country Near the Sea. A Natural History of the Cape Region of Baja California. Ann Swinger. University of Arizona Press, Tucson, 1987. xxviii, 399 pp., illus. \$12.95. Reprint, 1983 edition.

Handbook of Organic Chemistry. John A. Dean. McGraw-Hill, New York, 1987. xiv, 962 pp., illus. \$64.50.

Handbook of the Spinal Cord. Robert A. Davidoff, Ed. Vol. 4, Congenital Disorders and Trauma, and vol. 5, Infections and Cancer. xx, 823 pp., illus. \$149.75.

Handling and Management of Hazardous Materials and Waste. Theodore H. Allegri, Sr. Chapman and Hall (Methuen), New York, 1987. vi, 458 pp., illus. \$49.50.

Heavenly Clockwork. The Great Astronomical Clocks of Medieval China. Joseph Needham, Wang Ling, and Derek J. de Solla Price, with supplement by John Combridge. 2nd ed. Cambridge University Press, New York, 1986. xvi, 266 pp., illus. \$59.50.

L'Homme Communicant. Rodolphe Ghiglione. Colin, Paris, 1986. 272 pp., illus. Paper, 120 F.

Human Embryo Research. Yes or No? CIBA Foundation. Travistock (Methuen), New York, 1987. xvi, 232 pp., illus. \$39.95. From a meeting, Nov. 1985.

Illustrating BBC-Basic. Donald Alcock. Cambridge University Press, New York, 1986. viii, 184 pp., illus. Spiral bound, \$11.95.

Image Analysis and Processing. V. Cantoni, S. Leviadi, and G. Musso, Eds. Plenum, New York, 1986. x, 270 pp., illus. \$49.50. From a conference, Rapallo, Italy, Sept. 1985.

The Importance of Chemical "Speciation" in Environmental Processes. M. Bernhard, F. E. Brinckman, and P. J. Sadler, Eds. Springer-Verlag, New York, 1986. xii, 763 pp., illus. \$138. Dahlem Workshop Reports. Life Sciences Research Report 33. From a workshop, Berlin, F.R.G., Sept. 1984.

Insanity. The Idea and its Consequences. Thomas Szasz. Wiley, New York, 1987. xvi, 414 pp. \$17.95.

The Nightmare. Psychological and Biological Foundations. Henry Kellerman, Ed. Columbia University Press, New York, 1987. xxviii, 376 pp. \$40.

Nitrogen Economy of Flooded Rice Soils. S. K. De Datta and W. H. Patrick Jr., Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). viii, 186 pp., illus. \$60.50. Developments in Plant and Soil Sciences, 26. From a symposium, Washington, DC, 1983.

NMR Spectroscopy Techniques. Cecil Dybowski and Robert L. Lichter. Dekker, New York, 1987. viii, 373 pp., illus. Practical Spectroscopy.

Phase-Transfer Catalysis. New Chemistry, Catalysts, and Applications. Charles M. Starks, Ed. American Chemical Society, Washington, DC, 1987. x, 195 pp., illus. \$36.95. ACS Symposium Series, 326. Based on a symposium, Chicago, Sept. 1985.

Philosophy and the Brain. J. Z. Young. Oxford University Press, New York, 1987. viii, 233 pp. \$22.50.

Phosphate and Mineral Homeostasis. Shaul G. Massry, Michel Olmer, and Eberhard Ritz, Eds. Plenum, New York, 1986. xiv, 553 pp., illus. \$89.50. Advances in Experimental Medicine and Biology, vol. 208. From a workshop, Marseille, France, Sept. 1985.

Phosphoinositides and Receptor Mechanisms. James W. Putney, Jr., Ed. Liss, New York, 1986. xii, 400 pp., illus. \$78. Receptor Biochemistry and Methodology, vol. 7.

Science and Technology in Chinese Civilization. Cheng-yih Chen, Roger Cliff, and Kueo-mei Chen, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xx, 352 pp., illus. \$64.

Science, Medicine and the Community. The Last Hundred Years. Asa Briggs and Julian H. Shelley, Eds. Excerpta Medica, Princeton, NJ, 1986. xxii, 229 pp., illus. \$80. From a symposium, Kronberg, Taunus, F.R.G., May 1985.

Scientific Aspects of Graphology. A Handbook. Baruch Nevo, Ed. Thomas, Springfield, IL, 1986. xiv, 348 pp., illus. \$40.50.

Scientific Colonialism. A Cross-Cultural Comparison. Nathan Reingold and Marc Rothenberg, Eds. Smithsonian Institution Press, Washington, DC, 1987. xiv, 398 pp. Paper, \$29.95. From a conference, Melbourne, Australia, May 1981.

Theory of Magnetic Resonance. Charles P. Poole, Jr., and Horacio A. Farach, Eds. 2nd ed. Wiley-Interscience, New York, 1987. xviii, 359 pp., illus. \$59.95.

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Zoologist, B.S. Animal Scientist, B.S. Experience; neural-behavioral, teratology, and toxicology research. Seeks a position in any type of animal research. Will relocate. Available: 15 June 1987. Box 74, SCIENCE. 6/5, 12



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Applicants should possess proven administrative and management skills, excellent communicative capability, a strong record of research, an earned doctorate in science or engineering, and experience in an academic setting (or equivalent education/experience). Additionally, experience in, or extensive interaction with, one or more government agencies is desirable.

The Deputy Director will assist the Executive Director in all phases of the AWU operation, including contract negotiation, review of applications for research participation, and development of interaction among member universities, research laboratories and DOE. This is a 12-month position with excellent benefits and a salary range to \$50,000, depending on qualifications and experience.

Qualified candidates should send their resumes by July 31, 1987 to:



Associated
Western
Universities
Incorporated

Dr. James J. Brophy, Chairman
AWU Board of Directors
Associated Western Universities, Inc.
142 East 200 South, Suite 200
Salt Lake City, UT 84111-1519

AWU is an equal opportunity, affirmative action employer. Ethnic minorities and women are expressly invited to apply.

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

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

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

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

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

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

An Equal Opportunity Employer

Biotechnology company with laboratories in **Geneva**, engaged in the development of pharmaceutical products through genetic engineering has vacancies for

A CELLULAR IMMUNOLOGIST

with several years of postdoctoral experience in the field of lymphokines.

A MOLECULAR BIOLOGIST

having, at least, an MSc degree and experience in cDNA synthesis and library construction.

If this offer appeals to you, please send your resume, list of publications and the names of three references to:

Rita Gloor, Personnel Manager, B I O G E N
S. A. 46, Route des Acacias, 1227 CAROUGE
— GENEVA, Switzerland

All replies will be evaluated in strict confidence.

POSITIONS OPEN

EASTERN VIRGINIA MEDICAL AUTHORITY

The Department of Biochemistry at Eastern Virginia Medical School has several open faculty positions for outstanding candidates at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. These are tenure-track positions with competitive fiscal year salaries and provide excellent opportunities for independent research programs and teaching. Successful applicants will develop a strong research program in an area of modern biochemistry or molecular biology such as the mechanism of gene regulation, membrane transport, DNA-protein interactions, metabolic regulation, enzyme mechanism, or hormone receptors and transmembrane signaling. Faculty members will be expected to attract independent research grants and to spend a major part of their effort in research.

Please send curriculum vitae, a statement of research and teaching interests, and at least three letters of reference to: **Dr. Karl A. Schellenberg, Chairman, Department of Biochemistry, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23501.**

ASSISTANT PROFESSOR, Cornell University: The Department of Astronomy at Cornell University has an opening for a tenure-track Professor in Theoretical Astrophysics. Candidates must have considerable research experience in the following areas: physics of the interstellar medium, MHD shocks, stellar dynamics, and computational astrophysics. Candidates must have a Ph.D. in astronomy or physics and several years of postdoctoral experience. Send a letter of application, including curriculum vitae and the names of three references to: **Professor Yervant Terzian, Chairman, Department of Astronomy, Cornell University, Ithaca, NY 14853.** The deadline for receipt of applications is 1 July 1987. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

UTAH STATE UNIVERSITY DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

ASSISTANT PROFESSOR. Tenure track, to participate in interdepartmental Molecular Biology/Biochemistry Program. Research emphasis on molecular approaches to the structure and function of nucleic acids; experience in recombinant DNA technology desired. Teaching includes molecular biology and nucleic acid biochemistry. To be filled during the 1987 to 1988 academic year. Send résumé, description of future research interests, and names of at least three references by 30 June 1987 to: **Dr. E. A. Boeker, Utah State University, Logan, UT 84322-0300.** *Affirmative Action/Equal Employment Opportunity.*

ASSISTANT PROFESSOR DEPARTMENT OF ANATOMY

Applications are invited for a tenure-track position at the assistant professor level. Applicants should have a Ph.D. or the equivalent. The primary teaching responsibility will be in medical histology with some contribution to other subdisciplines. Research in one of the morphological sciences is anticipated. Teaching responsibilities are presently limited to two quarters with the remainder of the year free for research activities. Scholarly contributions as well as teaching excellence are considered in the decisions on rank and tenure. The Kirksville College of Osteopathic Medicine, the founding college of osteopathic medicine, is located in rural, northeastern Missouri. Applications will be accepted until 19 June 1987. Please send curriculum vitae, bibliography, and the name of three references to: **F. J. Julyan, Chairman, Department of Anatomy, the Kirksville College of Osteopathic Medicine, Kirksville, MO, 63501.** *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT RESEARCH BIOCHEMIST. To study lung injury and repair processes primarily related to oxidants, beginning 1 July 1987. Ph.D. in biochemistry or related field. Expertise in working with animals, assays of enzyme activities, polyamine determination with HPLC, and other biochemical and physiological procedures. Salary range: \$34,600 to \$38,900. Send curriculum vitae and names of three references to: **Donald F. Tierney, M.D., Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of California, Los Angeles, Los Angeles, CA 90024-1690.** *UCLA is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY

Transylvania University's Program in Biology announces a tenure-track position at the assistant professor level, beginning September, 1987. Doctorate and demonstrated commitment to excellence in undergraduate teaching required. Teaching responsibilities include embryology, histology, and invertebrate zoology. Some background in ecology desirable. Transylvania is an independent, liberal arts college with an enrollment of about 900, located in the beautiful Bluegrass region of Kentucky. Send curriculum vitae and three letters of reference to: **Dr. J. Hill Hamon, Program Director in Biology, Transylvania University, Lexington, KY 40508.**

An Equal Opportunity Employer

ASSISTANT PROFESSOR ENVIRONMENTAL PLANNING

Tenure-track position, Department of Landscape Architecture, University of California, Berkeley, effective 1 July 1988. Teaching of undergraduate and graduate levels, and research. Advanced degree in planning, landscape architecture, geography, environmental studies, earth, or natural sciences. Demonstrated competence in terrain/land analysis, land resources or environmental impact assessment, site evaluation, environmental mitigation, and restoration. Conversant with computer applications, geographic information systems, remote sensing. Sufficient depth in natural/physical science to develop substantial research or professional work and publication.

Résumés to: **Randolph T. Hester, Jr., Chairman, Department of Landscape Architecture, University of California, Berkeley, CA 94720.** Deadline 4 September 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF MICROBIOLOGY. This tenure-track position is available immediately. Candidates should have a Ph.D., M.D., D.D.S., or an equivalent degree and postdoctoral training. Preference will be given to applicants with research interests in host-parasite interactions, especially in mechanisms of microbial pathogenesis and host immune response to infectious microorganisms. Teaching experience in medical microbiology is desirable. The appointee is expected to conduct vigorous independent research in medical microbiology and to teach microbiology to students of health-related professions. Laboratory space and start-up support will be provided. Salary is negotiable. Interested persons should send curriculum vitae and brief description of research as well as the names and addresses of three individuals from whom recommendations may be obtained to: **Dr. Thomas D. Flanagan, Professor and Chairman, Department of Microbiology, School of Medicine, State University of New York at Buffalo, 205 Sherman Hall, Buffalo, NY 14214.** Target date for receipt of applications is 1 August 1987. *State University of New York is an Affirmative Action/Equal Opportunity Employer.*

TWO ASSISTANT PROFESSOR OF PHARMACOLOGY POSITIONS available at the Southeastern College of Osteopathic Medicine with joint appointments in the new Southeastern College of Pharmacy. Full-time positions starting after 1 July 1987. Must have a doctoral degree. Broad teaching experience is desirable. Applicants should submit curriculum vitae, list of references, and a statement of teaching and research experience as soon as possible to: **Patrick E. Bentley, D.O., Ph.D., Chairman, Department of Pharmacology, Southeastern College of Osteopathic Medicine, 1750 NE 168th Street, North Miami Beach, FL 33162.** Telephone: 202-682-0816.

ASSISTANT RESEARCH SCIENTIST/POST-DOCTORAL RESEARCH ASSOCIATE. Position available July 1987 to employ molecular biology techniques to study renal epithelial cell growth and differentiation. Background in receptor kinetics and cell culture desirable. Send curriculum vitae, names of three references, recent publications to: **Dr. H. David Humes, Department of Internal Medicine, University of Michigan Medical Center, Ann Arbor, MI 48109.** *Affirmative Action, nondiscriminatory employer.*

POSITIONS OPEN

MEMORIAL UNIVERSITY OF NEWFOUNDLAND DEPARTMENT OF BIOCHEMISTRY ASSISTANT/ASSOCIATE PROFESSOR IN BIOCHEMISTRY

The Department of Biochemistry, Memorial University of Newfoundland, St. John's, Newfoundland, invites applications from qualified individuals for a tenure-track faculty position at the level of assistant/associate professor of biochemistry effective 1 January 1988. Applicants should have a Ph.D. and productive postdoctoral experience if appointed at the assistant professor rank, and a proven record of independent research if appointed at the associate professor rank. The successful candidate will be required to establish a strong independent research program, and to undertake undergraduate and graduate teaching. The Department has strong interests in molecular biology, metabolic biochemistry, biological oxidation and toxicology, and biochemistry of macromolecules and membranes. Applicants should submit curriculum vitae and names of three referees to: **Dr. K. M. W. Keough, Head, Department of Biochemistry, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X9,** before 1 September 1987.

In accordance with Canadian Immigration policy, consideration, in the first instance, will be given to Canadian citizens and permanent residents of Canada. Others are encouraged to apply and will be considered.

BIOCHEMIST: 12-month tenure-track position in the Department of Chemistry, Agriculture Experiment Station, starting approximately 1 September 1987. Principally research. Rank and salary negotiable. All areas of research that may lead to new or improved food or non-food uses of agriculture products will be considered. These may include protein chemistry, biomass utilization, hormonal regulation of growth and development, or nutritional biochemistry. Ph.D. or equivalent required, postdoctoral training desired. Send résumé, transcripts, names of three references, research interests, and brief outline of proposed future research by 15 June 1987 to: **David Hilderbrand, Head, Chemistry Department, South Dakota State University, Brookings, SD 57007.** *An Equal Opportunity/Affirmative Action Employer. (Female/Male) Women and minorities encouraged to apply.*

BIOLOGICAL SCIENCES. Teach human anatomy and physiology for health science majors and human physiology for pharmacy and premedical students. Initiate a program of undergraduate research in physiology. Ph.D. in biology or physiology with an interest in undergraduate teaching. Nine-month, tenure-track appointment. Assistant professor, salary competitive. Send application and résumé with at least three references by 22 June 1987, to: **Dr. Carl Hoagstrom, Department of Biological Sciences, Ohio Northern University, Ada, OH 45810.** *Affirmative Action/Equal Opportunity Employer.*

BIOTECHNOLOGY POSITION

The Department of Biological Sciences at the University of Quebec, Montreal, invites applications for tenure-track faculty position from individuals with research interests in the area of environmental biotechnology. We seek outstanding candidates to complement present interests in genetic engineering, fermentation, and biocatalysis. Applicants should have a Ph.D. and postdoctoral experience in the area of specialization. Responsibilities will include the development of a strong research program, teaching at the graduate and undergraduate levels, and interacting with faculty and students in an interdisciplinary program. Language of instruction is French. Interested candidates should send curriculum vitae and three letters of recommendation by 25 September 1987 to: **Dr. Jean Gingras, directeur, département des Sciences biologiques, UNIVERSITÉ DU QUÉBEC À MONTREAL, Case postale 8888, Succ. "A", Montréal, Québec H3C 3P8 CANADA.** *According to Immigration Canada regulations, priority is given to Canadian citizens and to landed immigrants in Canada.*

POSITIONS OPEN

CELL BIOLOGIST STRUCTURAL BIOLOGIST

The Department of Pharmacology and the Program in Biological Sciences, University of California, San Francisco, seek candidates to fill two tenure-track positions at the level of assistant professor. Successful candidates will be expected to teach graduate and professional students and to conduct an independent research program. Research should focus on fundamental biological questions relevant to pharmacology in either of two areas: Position 1—Cell biology (including cytoskeleton, cell membranes, or signal transduction). Position 2—Protein structure and function, with emphasis on ligand binding (studied by crystallographic, spectroscopic, and/or electron microscopic techniques). Candidates will be judged on the basis of teaching ability and the quality of their research. Potential candidates should submit curriculum vitae, bibliography, brief description of research interests, and names of three referees to: **Chairman, Pharmacology Search Committee, Box 0450, University of California, San Francisco, CA 94143.** The deadline for applications is 1 September 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

CELL BIOLOGY RESEARCH SCIENTIST

Hana Biologics, Inc., a leader in research to provide living cells as therapy to restore normal physiologic function, has an opening for a research scientist. The successful candidate will become part of a research team investigating the propagation of specific cells for transplantation.

The applicant must have a Ph.D. and relevant postdoctoral experience in cell and developmental biology, mammalian cell culture or cell metabolism, with particular emphasis on epithelial or neural cells.

Hana is a dynamic biotechnology company located in Alameda, California, and offers competitive salary and fringe benefits commensurate with qualifications and experience. Please send curriculum vitae, list of publications, and names of three references to:

**Hana Biologics, Inc.
850 Marina Village Parkway
Alameda, CA 94501-1034
Attention: Personnel #6805**

CHAIRPERSON DEPARTMENT OF METEOROLOGY UNIVERSITY OF MARYLAND COLLEGE PARK

Nominations and applications are invited for the position of Chairperson of the Department of Meteorology at the University of Maryland, College Park. The Department consists of 12 faculty members, 4 research scientists, 15 research associates, and about 45 graduate students. About ten off-campus research scientists from NOAA and NASA also participate in various collaborative research projects.

The candidate should possess a doctoral degree and a record of excellence in scholarly achievements. The responsibilities include administration of a graduate teaching program, and of the research activities of the Department. The chairperson is expected to provide imaginative leadership and to enhance the role of the Department in the emerging national and international earth science programs.

Applications should be accompanied by curriculum vitae and the names of four references. Contact: **Dr. N. S. Chant, Chairman, Meteorology Search Committee, c/o Department of Physics and Astronomy, University of Maryland, College Park, MD 20742.** Please submit applications as soon as possible. Applications will be accepted until the position is filled.

The University of Maryland is an Equal Opportunity, Affirmative Action Employer. Women and minority candidates are encouraged to apply.

CLINICAL TOXICOLOGY

Associated Pathologists Laboratories, a progressive regional laboratory, has immediate openings in the Clinical Toxicology Department. Applicants should have a strong chemistry background; experience with GC, TLC, HPLC, GC/MS, a plus. Send résumé to: **Jo Anne Edwards, Associated Pathologists Laboratories, 4230 South Burnham Avenue, Suite 250, Las Vegas, NV 89119.**

IMMUNOPHARMACOLOGIST Ph.D. LEVEL PHARMACEUTICAL RESEARCH

The Pharmaceutical Research Division of Warner-Lambert/Parke-Davis has an opening for a scientist to join the Immunopharmacology Section within our Pharmacology Department.

Qualifications:

- Ph.D. with 1-2 years post doctorate experience
- Experience in inflammation research with an emphasis on in vitro and in vivo models of connective tissue metabolism
- Background in arachidonic acid or cytokine assay techniques desirable
- Strong oral, written and interpersonal skills

Responsibilities:

- Senior level contribution to an ongoing drug discovery effort
- Supervision of an ongoing screen and development of new in vitro and in vivo screens to assess the effects of compounds on connective tissue metabolism

Potential Benefit:

- The position will offer significant opportunity for creativity and professional development

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Qualified applicants should send curriculum vitae in confidence to: **Ms. S. Hultquist, Human Resources, Warner-Lambert/Parke-Davis, 2800 Plymouth Rd., Ann Arbor, Michigan 48105.**

WARNER LAMBERT

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MOLECULAR BIOLOGISTS

Unigene Laboratories, a multidisciplinary biotechnology research corporation, is seeking distinguished scientists for the following positions:

SENIOR SCIENTIST—Bacterial or Yeast Expression

A strong background in the cloning and expression of heterologous genes in *E. coli* or yeast. Expertise in genetics and microbiology is desirable.

SENIOR SCIENTIST—Higher Eukaryotic Cell Expression

A broad background in cellular and molecular biology, with strong emphasis in the expression of foreign genes in cell culture systems and the development of higher eukaryotic expression vectors. Experience in virology is desirable.

The successful candidates will have a Ph.D. degree and a record of accomplishment, including recent publications, demonstrating novelty and creativity. Post-doctoral or industrial research experience is desirable.

Unigene offers a comprehensive benefits package and the opportunity to work in an environment which fosters continuing professional development. Please send a C.V. and three references in confidence to:

**Personnel Department, M1
Unigene Laboratories, Inc.
110 Little Falls Road
Fairfield, NJ 07006**

unigene™

DNA Probe Diagnostics

ImClone Systems, an innovative, rapidly growing biotechnology company located in New York City, is seeking highly motivated individuals for the development of its proprietary DNA probe technology.

Minimum requirements are a doctorate degree and demonstrated productivity in either cloning or nucleic acid chemistry and detection. Relevant industrial experience would be an advantage. ImClone offers a challenging, multi-disciplinary environment for scientists who can assume both individual and team responsibility, as well as excellent salary and benefits.

Send CV to: **John Landes, ImClone Systems, 180 Varick St., New York, New York 10014.**



ImClone Systems Incorporated



RESEARCH MICROBIOLOGIST

The Research Division of W.R. Grace & Co., a Fortune 100 company and the world's largest specialty chemical company, has exceptional opportunities in its expanding biotechnology research programs for a

Research Microbiologist:

Design and optimize fermentation processes for the production of enzymes, biologically active proteins and other products using laboratory fermentors at the 1-30L scale. This position requires a Ph.D. in the Biological Sciences with at least three years of postdoctoral experience in fermentation research and development, preferably using computer-based process controls and instrumentation.

Projects will be multidisciplinary collaborative efforts which require scientists with a high degree of self-motivation, excellent communication skills and the ability to work as part of a large team.

We can offer you a competitive salary and an outstanding benefits program. Our research facility is located in the picturesque, planned community of Columbia, Maryland, midway between Baltimore and Washington, D.C. If you are interested in a rewarding and growth-oriented career, please send your confidential resume to:

Manager, Employment
Department AA
W.R. GRACE & CO.
Washington Research Center
7379 Route 32
Columbia, Maryland 21044

GRACE

One step ahead of a changing world

An equal opportunity employer M/F/H/V

RESEARCH MANAGERS MICROBIOLOGY AND MOLECULAR GENETICS

The Office of Naval Research (ONR) is seeking highly qualified individuals to plan and manage external contract research programs. The research sponsored is conducted principally at universities and government or industrial laboratories by leading scientists in the field. These are Civil Service positions at the GM-13/14/15 (\$38,727-\$69,976) levels, depending on individual qualifications.

The responsibilities of the incumbents will be:

- **Microbiologist** (Announcement #87-50) to conceive, organize and direct research and development programs in microbiology with emphasis on microbial metabolism, marine microorganisms, and environmental effects on microorganisms.
- **Molecular Geneticist** (Announcement #87-51) to conceive, organize and direct research and development programs in molecular genetics with emphasis on the transfer of genetic material between organisms and regulation and control of gene expression.

The incumbents 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 to Navy management. These positions provide 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 a Ph.D. or equivalent and/or at least one to three years of professional experience. Demonstrated research experience is strongly preferred. Interested persons should submit 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, Code 01242P Attn: (Announcement #) S
800 North Quincy Street, Arlington, VA 22217-5000

Applications will be accepted through 31 July 1987 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.

AN EQUAL OPPORTUNITY EMPLOYER • U.S. CITIZENSHIP REQUIRED

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF PHARMACOLOGY

The State University of New York Health Science Center at Syracuse, College of Medicine, a center for research, professional education, and patient care, invites applications and nominations for the position of Professor and Chairperson, Department of Pharmacology. Candidates must have an M.D., Ph.D., or equivalent degree, a distinguished research record and proven leadership and administrative ability. A highly competitive salary and generous fringe benefits are offered. Send nominations or letters of application (with curriculum vitae, summary of experience, and four letters of reference) to: **Dr. Larry F. Lemanski, Chairperson, Search Committee, Department of Anatomy and Cell Biology, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210.**

Affirmative Action/Equal Opportunity Employer.

CLINICAL CHEMIST. Applicants with M.D. and/or Ph.D. degree are invited to apply for an unexpected opening in our clinical chemistry section. Faculty appointment can be tenure-track or clinical-track depending on experience and interests. The successful candidate will help to lead the clinical chemistry laboratory of Barnes Hospital, a 1054-bed teaching hospital of the Washington University Medical Center. Successful candidates should have a commitment to excellence in teaching and patient care. Academic rank and salary will be commensurate with prior experience and accomplishments. Send letter of inquiry and curriculum vitae to: **Jack H. Ladenson, Ph.D. or Jay M. McDonald, M.D., Division of Laboratory Medicine, Washington University School of Medicine, 660 South Euclid—Box 8118, St. Louis, MO 63110.**

CYTOGENETIC LABORATORY DIRECTOR

Board-certified clinical cytogeneticist, full- or part-time, required for growing commercial diagnostic laboratory located in New York City suburb. M.D. or Ph.D. with experience in hospital or commercial laboratory. Large staff, diversified caseload, pleasant working environment. Curriculum vitae and salary history to: **Box 84, SCIENCE.** All replies will be held in strictest confidence.

DENDROECOLOGIST/FOREST ECOLOGIST

The Laboratory of Tree-Ring Research invites applications for a tenure-track assistant professorship in dendrochronology, available January 1988. The appointee will be required to develop a strong program of tree-ring research. A Ph.D. is required as is proven ability in either dendroecology or the study of forest communities in a biospheric context. Review of applications will begin 1 August 1987. Send curriculum vitae, bibliography with selected publications, statement of research interests, and have three letters of reference sent to: **M. K. Hughes, Laboratory of Tree-Ring Research, University of Arizona, Tucson, AZ 85721. The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

DIRECTOR CLINICAL CYTOGENETICS LABORATORY

The Department of Laboratories and Pathology at Los Angeles County—University of Southern California Medical Center, the principal teaching hospital of the University of Southern California School of Medicine, seeks a Director for its Cytogenetics Laboratory. Requirements include a Ph.D. in cytogenetics or related field, experience in medical diagnostic cytogenetics and molecular genetics, and eligible for or certified by the American Board of Medical Genetics. Responsibilities include directing the cytogenetics laboratory, establishing an independent research program and participation in the teaching programs of the Department of Pathology. Faculty appointment in the University of Southern California School of Medicine at a rank commensurate with qualifications and experience.

For further information, telephone 213-226-7151. To apply, send curriculum vitae and three references to: **Edward T. Wong, M.D., Associate Director of Laboratories and Pathology, LAC/USC Medical Center, Room 2900, 1200 North State Street, Los Angeles, CA 90033.**

POSITIONS OPEN

The University of California, Irvine, Department of Psychiatry and Human Behavior, under the direction of **William E. Bunney, M.D., Professor and Chairman,** is seeking a **DIRECTOR** of a 93-bed inpatient psychiatric facility. The position will involve overseeing the inpatient and outpatient clinical, teaching, and research activities of the hospital. This is a full-time university faculty position at the level of professor (tenured). Candidates must be boarded in psychiatry, have extensive inpatient and outpatient administrative experience, have experience administering psychiatric research units, have published extensively in biological psychiatry, and must be recognized internationally and nationally for psychiatric research accomplishments. Experience treating and conducting research in schizophrenia is desired. Salary and academic rank commensurate with qualifications and experience. Send curriculum vitae and letters of reference by 20 July 1987 in care of: **William E. Bunney, M.D., Professor and Chair, Department of Psychiatry and Human Behavior, University of California, Irvine, CA 92715. The University of California is an Affirmative Action/Equal Opportunity Employer.**

DIRECTOR COAL EXTRACTION AND UTILIZATION RESEARCH CENTER SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE

Applications are invited for the position of Director of the Coal Extraction and Utilization Research Center, available immediately. A Ph.D. degree in science or engineering is required. Applicants must have leadership ability and significant experience in coal or coal-related research, grantsmanship, and in developing coal or coal-related research programs. Applicants must also have demonstrated the ability to communicate well with others at all levels, and to work constructively with faculty and staff from a variety of disciplines. Responsibilities include developing and coordinating research programs related to coal, assisting the faculty in securing and managing external research funds, acting as an interface between the University and industry, the state government, and the federal government in coal-related matters, and to coordinate the collection and dissemination of the results of faculty and staff research relating to coal. Inquiries should be directed to:

**Chairman, Search Committee
Coal Research Center
Southern Illinois University at Carbondale
Carbondale, IL 62901**

Closing date: 15 June 1987, or until filled.
An Equal Opportunity/Affirmative Action Employer.

DIRECTOR, MOLECULAR BIOLOGY

A leading independent and well-established biotechnology company in southern California is seeking a qualified individual in their research and development department to direct the company's efforts in its newly formed molecular biology department.

The candidate should have a Ph.D. and at least 5 years of experience in all aspects of molecular biology and immunology, especially recombinant DNA such as nucleic acid hybridization, RFLP, and monoclonal technology. In this capacity the candidate will interface with a highly prestigious and knowledgeable scientific advisory board and will be responsible for recruiting an initial staff of ten scientists. The candidate must have proven leadership skills, and be able to communicate well both within the company as well as with outside contacts. Remuneration and fringe benefits commensurate with experience.

For further information please forward your résumé in strict confidence to **Box 82, SCIENCE.**

ELECTRONICS DESIGN

Small, growing manufacturer of biomedical science instrumentation seeks a talented individual for hardware and software design. Formal electronics training desirable, but not a requirement for individual with proven abilities. Ph.D. in physiology, or one of the life sciences a plus. Chicago location. Please submit résumé, salary requirements, and all other relevant data to: **Box 83, SCIENCE.**

POSITIONS OPEN

ELECTRON MICROSCOPIST. A junior-level research position is available for investigations of basic mechanisms in the normal and aging cochlea. This position is part of a diverse group with skills in assessment of hearing in humans and animals, cochlear physiology, carbohydrate histochemistry, immunohistochemistry, and CNS structure and function. Send curriculum vitae and references to: **Joe C. Adams, Department of Otolaryngology and Communicative Sciences, Medical University of South Carolina, Charleston, SC 29425. Equal Opportunity/Affirmative Action Employer.**

EMINENT SCHOLAR IN APPLIED ECOSYSTEM ECOLOGY

The College of Science at Murray State University seeks applications and nominations for an Endowed Chair in Applied Ecosystem Ecology jointly funded by the Commonwealth of Kentucky and Murray State University.

Applicants must be recognized leaders in ecosystem ecology. The professor is expected to conduct quality personal research projects and to catalyze development of an interdisciplinary research team having locus around the Center of Excellence for Ecosystems Studies housed at the Hancock Biological Station on nearby Kentucky Lake. The successful candidate will be central to efforts to develop an internationally recognized model for reservoir research. Greater detail of supporting staff and facilities and the Center of Excellence will be provided upon receipt of application or request.

The 12-month appointment is to be at the Distinguished Professor level. Secretarial and technical support will be provided, and office/research space is available both on campus and at the Hancock Biological Station.

Letters of application, a current curriculum vitae, and the names, addresses, and telephone numbers of at least three references should be sent to **Dr. Gary W. Boggess, Dean, College of Science, Murray State University, Murray, KY 42071.** To be assured of full consideration, applications should be received by 1 July 1987. *Murray State University is an Affirmative Action/Equal Opportunity Employer.*

ENDOWED CHAIR AND PROGRAM IN BIOMOLECULAR X-RAY CRYSTALLOGRAPHY

The University of Minnesota Medical School invites nominations and applications for the William F. Dietrich Land Grant Chair in Fundamental Cell/Molecular Biology. The recipient of the Chair shall hold a tenured faculty appointment at the rank of Professor in the Department of Biochemistry in the Medical School and will develop an interdisciplinary program in biomolecular structure. We seek a candidate with a Ph.D., M.D., or equivalent foreign degree. The individual must have outstanding academic credentials, evidence of major contributions to an area of x-ray crystallography of biological macromolecules, an international reputation for excellence in research, and demonstrated effectiveness in teaching. The person will be expected to establish a research program in x-ray crystallography and coordinate the recruitment of at least three additional tenure-track junior faculty with research interests in complementary areas. These additional faculty positions will be in the Departments of Biochemistry, Cell Biology and Neuroanatomy, and Physiology. Financial resources and research space appropriate for the purchase and housing of state-of-the-art x-ray crystallography facilities will be provided.

Nominations and applications are to be sent by 8 September 1987 to:

**James W. Bodley, Chair
Dietrich Chair Search Committee
Department of Biochemistry
University of Minnesota
435 Delaware Street S.E.
Minneapolis, MN 55455**

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

Research Scientists San Francisco Bay Area

BIO-RAD LABORATORIES is a worldwide leader in the fields of clinical diagnostics, chemical separations and analytical instrumentation. Our Clinical Diagnostics Division is continuing to expand its Research Group to undertake the development of new immunoassay systems for the 1990s. We are looking for highly motivated professionals with expertise in the following fields:

Immunoassay Product Support

Excellent problem solving skills and experience in the technical support of immunoassays are essential.

Cancer Immunology

This challenging opportunity requires a background in immunology or biochemistry and post doctoral experience with emphasis in tumor immunology and clinical immunology.

Protein/Peptide Chemist

You will be involved in synthesis of peptides by solid phase methodology, their purification and characterization using HPLC and amino acid analysis, and modification and derivitization for preparation of various conjugates. Requires a BS/MS with experience in organic synthesis and protein/peptide chemistry.

Infectious Disease Diagnostics

You will utilize your expertise in immunology and immunochemistry. Requires at least two years' experience in immunoassay development. Training in clinical microbiology preferred.

Hybridoma Development

Requires at least three years' hybridoma experience. Strong communication and leadership skills are essential.

In these positions you will be working in a multi-disciplinary environment where you can enjoy the freedom to explore new technologies. Career growth and recognition of accomplishment are offered. Interaction with the scientific community through publication and meeting attendance is encouraged.

Be part of the team in our new facilities overlooking the Bay in Hercules.

We offer a competitive salary and benefits package. To learn more about these opportunities, please send your resume and salary history to Rodney Reese, Corporate Employment Manager, Bio-Rad Laboratories, Dept. #293-S605, 1414 Harbour Way South, Richmond, CA 94804. An equal opportunity employer.

BIO-RAD

Bio-Rad Laboratories

SYNTRO

SYNTRO, a biotechnology company focusing on the development of vaccines for the animal health market and selected products for the specialty chemical and human health markets, has immediate openings for senior scientists and research associates in:

IMMUNOLOGY MOLECULAR BIOLOGY NUCLEIC ACID CHEMISTRY

To complement existing scientific staff preference will be given to those with experience in:

- Fermentation engineering
- Eukaryotic/viral expression systems
- Immunochemistry and monoclonal antibody production
- Nucleic acid sequencing

SYNTRO, located in the heart of the San Diego scientific community, offers a competitive compensation package in an outstanding research environment, as well as excellent opportunities for professional growth. If you would like to contribute to the growth and development of a successful biotechnology company, please send your resume and references to:

Director of Organizational Development

SYNTRO CORPORATION

10655 Sorrento Valley Road
San Diego, CA 92121

an equal opportunity employer

Research Scientists

Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines is currently seeking two dedicated professionals to join our staff of Research Scientists.

Each position requires a PhD and at least 3 years' experience, preferably in molecular biology, DNA biochemistry or gene cloning. A background in the expression of foreign genes in bacterial or yeast systems would be an advantage.

Applicants should send resume including salary history to: **Human Resources Department, Praxis Biologics, 300 East River Road, Rochester, NY 14623.**

**PRAXIS
BIOLOGICS**

An equal opportunity employer, m/f.

BIOLOGICAL/BIOTECHNOLOGY

The LILLY RESEARCH LABORATORIES, a division of Eli Lilly and Company, is expanding its biology and biotechnology initiatives related to molecular and cell biology, immunology, connective tissue and pulmonary research. In order to support this effort, we need scientists at the Senior (Doctoral) and Associate (BS/MS) levels.

A state-of-the-art Biomedical Research Facility and a proposed building will house this expanding research effort.

In keeping with our long-standing commitment to research excellence it is our intent to attract scientists with post-doctoral experience and demonstrated research accomplishments. Senior Research Scientists would be expected to develop their own research programs that would complement the endeavors of other scientists. Opportunities are present for collaboration with pharmacologists, biochemists, cell biologists, molecular biologists, immunologists, pathologists and medicinal chemists.

We offer our Senior Scientists project responsibility, technical support, and recognition to stimulate their creative and innovative approach to new and exciting research that will lead us into the 21st century.

The specific areas of research and the requirements for each follow:

Molecular Biology Research

Molecular Immunology (B₁)

This position requires a Ph.D. preferably with 2-4 years post-doctoral experience. The scientist should have experience cloning mammalian genes and be familiar with techniques such as site directed mutagenesis. In addition, there should be evidence of a strong interest in immunology and the genetics of molecules involved in the immune response including cytokines and antibodies.

Transgenic Animal Research (B₂)

We are seeking a doctoral level scientist skilled in the techniques of microinjection, embryo transplantation, and mammalian cell culture. Post doctoral experience with recombinant DNA techniques such as plasmid construction, hybridization, and transformation is desirable. The scientist will join an interdisciplinary team developing transgenic animals as models of human diseases.

Connective Tissue Research

Bone Biology (Osteoporosis) (N₁)

We are seeking a Senior Scientist with a Ph.D. in Pharmacology/Cellular and Developmental Biology/Biochemistry to study factors influencing bone/cartilage differentiation and to seek new therapeutics in osteoporosis, associated bone disorders and osteoarthritis. Experience with *in vivo* models is essential. The Scientist would join others expert in biochemistry, cellular and molecular biology and pathology.

Inflammatory Disease (N₂)

A Senior Scientist with a Ph.D. in Pharmacology/Cell Biology/Biochemistry is needed to participate in a research program directed toward the understanding of inflammatory disease mechanisms and the development of novel agents for therapeutic intervention. Expertise in the role of macrophages and/or polymorphonuclear leukocytes in the inflammatory process is essential and will complement existing expertise in pharmacology, immunology, biochemistry, and pathology.

RESEARCH OPPORTUNITIES

Pulmonary and Leukotriene Research

Phospholipid (N₃)

A Senior Scientist with a Ph.D. in Pharmacology/Cell Biology/Biochemistry will participate in a research program directed toward understanding the roles of cellular phospholipids in the generation of disease associated mediators (e.g. leukotrienes, thromboxanes, prostaglandins, and platelet activating factor) and the development of novel inhibitors of the generation of these mediators. Experience with whole cell enzyme assays is desirable. Disease targets include asthma, allergy and inflammation.

Biochemical Pharmacology (N₄)

A Senior Scientist with a Ph.D. in Pharmacology/Biochemistry/Cell Biology experienced in cellular aspects of the arachidonic acid cascade is needed to study the role of leukotrienes in pulmonary diseases. The biochemical expertise of this individual will support related efforts in studying the role of leukotrienes in myocardial infarction and ischemia, stroke, GI disease, inflammatory disease, skin diseases and their role in immune function.

Immunology Research

Immunology/Pharmacology (S₁)

A Senior Scientist is needed in the Cytokine Research group to address the role of cytokines in diseases other than inflammation and autoimmune disease such as immune defects in aging, study of the immunogenicity of antibodies, proteins and peptide drugs, immunological approaches to antiviral therapy, augmenting host defense, and neuroimmunology.

Monoclonal Antibody Research (S₂)

A Cell Biologist/Pharmacologist is being sought to utilize monoclonal antibody technology for the study and treatment of nonmalignant human disease. Areas of interest could include applications to cardiovascular disease (i.e. the biology of atherosclerotic plaque) or infectious diseases (in collaboration with antimicrobial and antiviral research programs). Research interests in the above areas with experience in hybridoma technology is desirable.

Scientists with a doctoral degree and post-doctoral experience in the aforementioned research areas are encouraged to send a curriculum vitae and indication of their specific area of interest [phospholipid (N₃), bone biology (N₁), etc.] to:

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

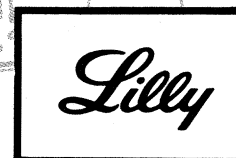
Associate (BS/MS) Scientists

The Associate Scientist will collaborate with and support the research effort of the Senior Scientist. Therefore, their role is one of utmost importance in the accomplishment of our research goals. The *aforementioned* areas of research, as well as the following areas, are searching for highly motivated BS/MS scientists with laboratory experience:

Autoimmune Disease • Antibiotic Gene Cloning • Mammalian Cell Culture • Mammalian Cell Physiology • Enzymology of Antibiotic Biosynthesis • Protein expression in Mammalian Cells • Pulmonary Pharmacology (*in vitro/in vivo*) • Osteoarthritis • Virology

Scientists interested in positions at the associate level should send their resume and an indication of their area(s) of interest to:

Michael R. Langley (ABR), Senior Personnel Representative
Eli Lilly and Company, Lilly Corporate Center
Indianapolis, Indiana 46285



Equal Opportunity Employer

Cancer Research Scientists

Biotherapeutics is a health care service company specializing in the development and application of advanced biotechnological approaches for the treatment of cancer. The company contracts with eligible cancer patients to perform laboratory research services designed to develop custom-tailored therapeutic options. Due to rapid growth in our Franklin (Nashville) and Memphis, Tennessee, laboratories and expansion plans for an international network of laboratories, Biotherapeutics has positions available for qualified individuals:

Monoclonal Antibodies—Scientists and technicians for development and screening of hybridomas producing anti-tumor antibodies.

Tumor Cell Biologists—Scientists and technicians experienced in processing tumor specimens, establishing primary cell lines, xenografts in nude mice.

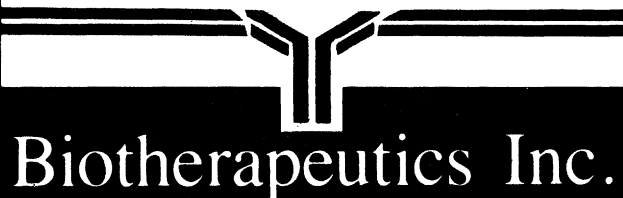
Cellular Immunologists—Scientists with broad-based knowledge of lymphokines and cell mediated cytotoxicity.

Director, Technical Marketing and Contract Services—to establish and maintain scientific and business collaborations, manage marketing of immunological products and contract research services. Should be experienced in the business and technical aspects of hybridoma technology, conventional and nude mice.

Flow Cytometry, Director—to be responsible for day-to-day operations of a core laboratory facility performing multi-color fluorescence, DNA content analysis, and cell sorting. Background in immunology preferred.

Research Technicians, Biochemistry—experience with protein toxins, enzyme purification and characterization, and modern analytical methods such as, HPLC, protein electrophoresis and chromatography.

Send CV with salary history to: **Personnel Department, Biotherapeutics Inc., 377 Riverside Drive, Franklin, TN 37064.**



Clinical Data Manager

Smith Kline & French Laboratories, a major worldwide pharmaceutical company, has an immediate opening for a scientific administrator in its Preregistrational Affairs Department at the company's new worldwide R&D headquarters located near Valley Forge, PA. This is a manager level position which offers opportunity to develop knowledge of the drug development and registration process from a world wide perspective.

The successful candidate will be responsible for reviewing clinical reports and for preparing summaries and discussions of data to be included in dossiers used by SK&F Regulatory Affairs to obtain clinical trials and marketing approval worldwide. He/she will also be involved in responding to questions from regulatory authorities. Other duties will include advising R&D on development project teams and maintaining an awareness of new development in clinical research. Some overseas travel is expected.

Candidates must have a Ph.D., a minimum of five years clinical trials experience in industry, together with excellent writing ability and demonstrated skills in report and document preparation. An in-depth knowledge of pharmacokinetics would be a distinct advantage.

Smith Kline & French offers an excellent salary and benefits package. For confidential consideration interested candidates should send c.v.'s and salary requirements to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1584 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

SCIENTISTS AND RESEARCH ASSOCIATES

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

Applications are requested for Scientists and Research Scientists in:

MOLECULAR CELL BIOLOGY

BS/MS in molecular and cellular biology, microbiology or biochemistry. Experience with recombinant DNA techniques such as cloning, nucleic acid sequencing, and nucleic acid hybridization analysis desirable. Yeast systems also desirable.

MOLECULAR VIROLOGY

To develop gene transfer systems. Experience with animal virus systems (especially retroviruses) and tissue culture techniques required. Prefer background in recombinant DNA techniques, also.

PROTEIN CHEMISTRY

BS/MS in Biochemistry or Chemistry. Experience in analytical protein analysis, HPLC, and protein cleavage methods. Protein sequencing experience, either automated or manual, is a plus.

We offer a comprehensive benefits package and competitive salaries. For confidential consideration, please submit your curriculum vitae, a statement of research interests and goals, and the names of three professional references to **SIBIA, Department 4059, 505 Coast Boulevard South, La Jolla, CA 92037.** Equal Opportunity Employer.

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1515 BROADWAY
NEW YORK, N.Y. 10036**

RESEARCH IMMUNOLOGIST

An Immunologist with expertise in cellular immune responses to viral infections to play a key role in the development and testing of genetically engineered viral vaccines. Candidates should have a Ph.D. with strong post-doctoral experience, and skill in *in vivo* animal models.

You will enjoy working in our modern, well-equipped facilities in Philadelphia's prestigious Main Line suburban area. Besides an environment which fosters discovery, we offer a competitive salary, excellent benefits, and superior career opportunities.

Respond immediately by forwarding your CV and salary requirements, in confidence, to:
Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101. Equal Opportunity Employer, M/F/H/V responses encouraged.

Wyeth Laboratories



RESEARCH OPPORTUNITIES

We are recruiting research scientists (Ph.D.) to join our widely respected team working on the genetic improvement of crop plants. For each of these positions, successful applicants will join an ongoing research program to which the company is strategically committed. Rank of these appointments is open and depends on extent of previous experience. Annual salaries for Research Scientists begin at \$32,000, and for Principal Scientists at \$38,000 per year.

Transformation Cell Biology—Legumes (File #900). Provide the scientific leadership in our efforts to develop and refine for commercial use gene transfer methods for legume crop species. Applicants should be conversant with the range of methods used in plant gene transfer, comfortable working closely with molecular biologists and plant breeders, and interested in the scientific as well as commercial aspects.

Peptide Chemistry (File #800). Lead a protein sequencing group and collaborate with many scientists in our efforts to isolate plant genes encoding agriculturally important proteins. Applicants should have strong credentials in peptide and protein chemistry, demonstrated abilities at peptide isolation and protein sequencing, and be interested in developing new methodology that will improve gene isolation technology.

Protein/Membrane Biochemistry (File #803). Join a top rate team working on the engineering of plant proteins, some of which are membrane-associated. Applicants need not have plant research experience, but should present strong credentials in two or more of the following areas: protein purification, immunochemistry, cDNA screening, membrane proteins, and analytical instrumentation. Two complementary appointments in this area are anticipated.

Complex Carbohydrate Biochemistry (File #806). Initiate a major new research effort in the engineering of plants with altered polysaccharide composition. This is a unique opportunity for the right person to help set the agenda for a leading program in new food and nonfood uses of plant products. Qualified applicants could be experienced carbohydrate biochemists with interests in plant metabolism or cell biologists interested in the cytoskeleton and mechanisms of cell wall deposition who are eager to work with molecular biologists and gene transfer specialists to make things happen in a new area.

Molecular Biology of Plant Development (File #1000). Join a strong research team focused on gene expression during morphogenesis. Applicants should be skilled plant molecular biologists with experience in vector construction and gene regulation, and interests in refining the expression of developmentally regulated genes for commercial ends.

Calgene offers competitive remuneration and benefits including equity participation in the company, a collegial scientific environment, every opportunity for scientific career growth including a liberal publication policy, and the many advantages of working and living in a pleasant Northern California college town within easy reach of the San Francisco Bay Area and the high Sierra.

Please send a letter quoting the appropriate file number and summarizing your career aspirations and previous experience, along with a resume and the names of at least 3 qualified references by 29 June to:



CALGENE

Scientific Recruiting

File # _____

Calgene, Inc.

1920 Fifth St.

Davis, CA 95616

EOE

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF MEDICAL BIOCHEMISTRY AND GENETICS

Search reopened. The Department of Medical Biochemistry and Genetics invites applications for a junior- or senior-level, tenure-track faculty position. Salary and rank are open and dependent upon qualifications. As part of a rapidly expanding research community, candidates are expected to establish or maintain a vigorous research program and participate in medical and graduate instruction. Applications from individuals with research interests in any area of biochemistry or molecular genetics are encouraged. Submit curriculum vitae, description of research interests, and names of three references to: Search Committee, Department of Medical Biochemistry and Genetics, College of Medicine, Texas A&M University, College Station, TX 77843-1112. *Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN DEVELOPMENTAL BIOLOGY

Tenure-track position teaching general biology, microbiology, bacteriology, anatomy and physiology, and genetics. Must be able to administer cooperative programs in medical technology and nursing. Requires Ph.D. in biology and evidence of ability to teach effectively at the undergraduate level. Interest in teaching at a liberal arts college with interaction among various disciplines is helpful. Start 20 August 1987. Send letter of application, résumé, and transcripts to: Gary E. Gammon, Dean, Eureka College, Eureka, IL 61530. *Equal Opportunity Employer.*

FACULTY POSITIONS IN MOLECULAR BIOLOGY

The Department of Biochemistry of the University of Miami School of Medicine invites applications for faculty posts that will strengthen its program in molecular biology. These are tenure-track positions at the level of assistant, associate, or full professor. The intent is to add to our expertise in the application of molecular genetics to the study of development, gene regulation, macromolecular structure-function relationships (including crystallography), endocrinology and prokaryotic biology. Applicants should send curriculum vitae with a summary of present and future research interests, and request that three letters of recommendation be submitted to: Dr. W. J. Whelan, Chairman, Department of Biochemistry (R629), University of Miami School of Medicine, P.O. Box 016129, Miami, FL 33101-9990, so as to reach him preferably before 1 September 1987. *An Equal Opportunity/Affirmative Action Employer.*

GENETICIST: The Biology/Microbiology Department of the University of Wisconsin Oshkosh is seeking applicants for a one-year-only academic staff lecturer position for a eukaryotic geneticist starting 1 September 1987. Teaching responsibilities (12 credits/semester) include basic genetics, human genetics, evolutionary biology, and share introductory biology courses. Teaching experience desirable. Ph.D. required. Send letter of application, current résumé, transcripts, and three letters of recommendation to: Dr. M. A. Rouf, Department of Biology and Microbiology, University of Wisconsin Oshkosh, Oshkosh, WI 54901. Screening will begin 1 July 1987. *The University of Wisconsin Oshkosh is an Affirmative Action/Equal Opportunity Employer.*

PENN STATE HUMAN GENETICIST: The Department of Anthropology seeks human molecular geneticist for its Anthropological Genetics Laboratory. This tenure-track position provides an opportunity for a serious scientist who prefers an academic environment to take a leadership role in the application of modern methods to the genetic basis, origins, and evolution of human variation, open but not restricted to biomedical traits. Exceptional living conditions accompanied by excellent resources and an established interdepartmental Graduate Program in Genetics. Our department has two members of U.S. National Academy of Science and tradition of academic leadership. Send curriculum vitae and names of three references to: Kenneth Weiss, Head, Department of Anthropology, Penn State, Box S, 409 Carpenter, University Park, PA 16802 (telephone: 814-865-2509). Apply by 15 August 1987; search will remain open until candidate has been found. *An Equal Opportunity/Affirmative Action Employer.*

SENIOR TOXICOLOGY MANAGER FOR THE UK

We are advising ICI Pharmaceuticals Division on the appointment of a Toxicology Manager who will act as project manager with full responsibility for the toxicological evaluation of many of the division's development compounds and will also manage a section of general, reproductive and genetic toxicologists engaged in both assessment and research.

The position is based on the site of the division's world-wide headquarters at Alderley Edge in attractive rural Cheshire. The business employs some 1500 R&D staff, the laboratories are superbly equipped and support the company's substantial and highly successful pharmaceutical business.

The post will appeal to:

- Scientists who want to return to the UK
- Scientists who are attracted by the challenge of working abroad
- Scientists wanting to capitalize on their US experience

Applicants will have a keen intellect, appropriate scientific training, pharmaceutical industry experience, project and staff management ability, communication skills and sound judgement.

The Company pays competitive salaries and the post carries a profit sharing bonus, executive pension, medical insurance, a company car and good prospects for progression.

Send C V with salary history to:

Mr. Ian Beatty

Tarnow INTERNATIONAL

Trinity Gardens
9 Bromham Road
Bedford, U.K. MK40 2BP

Telephone: 011 44 234 272277

RESEARCH PROJECT COORDINATION MANAGER

Sandoz Pharmaceuticals Corporation, a leading international pharmaceutical company with a strong commitment to biotechnology research, is seeking an individual for the position of Research Project Coordination Manager within the Drug Registration and Regulatory Affairs Department.

We seek an individual with the ability to develop full scale project plans which encompass the activities required for successful regulatory submissions. Our successful candidate will be responsible for planning and coordinating the resources necessary for the successful registration of IND's, NDA or product license applications. The individual will serve as Project Liaison with Business Management, Manufacturing, and the Food and Drug Administration; and will specialize in the coordination of projects which are developed through the application of biotechnology.

This position demands a self-reliant individual who possesses excellent communication and interpersonal relationship skills. Requirements include knowledge of the drug development process. A strong science background at the graduate level with emphasis in immunology, molecular biology and/or macromolecular biochemistry is required. Regulatory experience with the Food and Drug Administration is desirable.

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

For prompt consideration, please forward your resume and salary requirements in confidence to:



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

An Equal Opportunity Employer M/F/H/V

Ph.D. SCIENTIST AIDS VACCINE RESEARCH

As part of our expanding activities in Viral Vaccine Research and Development, the Department of Virus and Cell Biology at the Merck Sharp & Dohme Research Laboratories is able to offer an excellent career research opportunity. We envision a long-term commitment to AIDS-related research.

Laboratory studies will encompass the immunodeficiency virus (HIV) and the antigenic analysis of candidate vaccines. While previous laboratory experience with HIV is highly desirable, all applicants with significant experience in up-to-date immunological techniques, cell culture methodology and/or virological techniques will be seriously considered.

An excellent salary and a superb benefits program accompany this position at our modern, state-of-the-art research facilities located 20 miles northwest of Philadelphia.

Reply in confidence to:

Jacques P. Kueny
Manager, Personnel Relations

Merck Sharp & Dohme Research Laboratories

West Point, PA 19486
Equal Opportunity Employer, M/F



Merck & Co., Inc.

NEUROSCIENTIST PHARMACEUTICAL RESEARCH

The Neuroscience section in the Department of Pharmacology at Warner-Lambert/Parke-Davis is seeking applicants to assist in the evaluation of potential new cognition enhancing agents. The successful applicant will perform morphometric analysis of neurite outgrowth in tissue culture, quantification of neural regeneration following brain injury in rodents and small animal stereotaxic surgery.

This position requires a BS/MS in Neuroscience or related field with experience in culturing neural tissue.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Qualified applicants should send curriculum vitae in confidence to: **Ms. S. Hultquist, Human Resources, Warner-Lambert/Parke-Davis, 2800 Plymouth Rd., Ann Arbor, Michigan 48105.**

**WARNER
LAMBERT**

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

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

Drug Metabolist

We are seeking a Biochemist/Chemist in Bioanalytical and Metabolic Research or a Pharmacologist with significant experience performing quantitative drug metabolism studies in vivo and in vitro. Your primary responsibility will be to design,

implement, and interpret studies in laboratory animals and humans to define the absorption, distribution, metabolism, and excretion of new drug candidates. It will be necessary to work closely with researchers in related disciplines to acquire the information needed to obtain IND and NDA approvals for these new drugs.

This position requires a PhD in Pharmaceutical/Medicinal Chemistry or Biochemistry, as well as 0-5 years in the pharmaceutical industry. You should have working knowledge of separation and purification techniques, experience with analytical procedures involving radioisotopes, HPLC, GC, and TLC, and familiarity with the isolation, purification, and identification of metabolites and enzyme kinetics.

Joint Disease Research

In this position you will direct a unit within the Department of Inflammation Biology whose goal is discovery of new anti-arthritis through better understanding of disease processes. This position requires a minimum of 3 years of postdoctoral or industrial experience in models of inflammatory joint disease. Familiarity with the cellular aspects of chronic joint disease is essential.

Please send your resume to Syntex, Dept. PS/SCI, 3401 Hillview Avenue, Palo Alto, CA 94304. An equal opportunity employer.



POSITIONS OPEN

HEAD DEPARTMENT OF MICROBIOLOGY THE UNIVERSITY OF TENNESSEE KNOXVILLE, TENNESSEE

EXTENSION OF SEARCH: Applications will be reviewed starting 1 September 1987. **QUALIFICATIONS:** Doctoral degree in microbiology or closely allied biological science; demonstrated productivity in microbiological research, and excellence in teaching; administrative experience or evidence of administrative ability. **RESPONSIBILITIES:** To provide academic and administrative leadership in a department which serves both the College of Liberal Arts and the College of Veterinary Medicine. **STARTING DATE:** Negotiable. **APPLICATIONS:** 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 five individuals who can evaluate the applicant's qualifications for the position. All materials should be sent to: **Dr. Mary Ann Handel, Chairman, Search Committee, Department of Microbiology, University of Tennessee, Knoxville, TN 37996-0845.** For further information call: **Dr. Handel, Department of Zoology, 615-794-2371.** **CLOSING DATE:** Nominations should be made as soon as possible; applications will be reviewed beginning 1 September 1987. *UTK is an Equal Employment Opportunity/Title IX Section 504 Employer.*

IMMEDIATE OPENING

A position to establish a cell culture laboratory for growing cerebral endothelium and tumor cell types. Additional experience in electron microscopy and in vivo techniques is desirable. Salary is commensurate with experience.

Richard Broadwell, Ph.D.
Division of Neurological Surgery
University of Maryland
Medical School Teaching Facility
10 South Pine Street; Room 634
Baltimore, MD 21201
Telephone: 301-328-5482

IMMUNOLOGIST. The Smith College Department of Biological Sciences invites applications for a tenure-track position in immunology at the assistant professor level to start in either January or September 1988. The candidate should have a Ph.D., an interest in teaching, and a research program in which undergraduates can participate. Teaching duties will include an advanced course in immunology and participation in an intermediate course in cell biology. The department is located in a modern, well-equipped science center with funds available to initiate a vigorous research program. Located in western Massachusetts, Smith College is a leader in the education of women and has an outstanding record in the number of professional women biologists who are alumnae. The Five College Consortium, which includes Smith, Amherst, Mount Holyoke and Hampshire Colleges, and the University of Massachusetts, provides a rich intellectual and cultural life for faculty and students, as well as additional collegial opportunities in teaching and research. The successful candidate may apply to become an Associate Faculty Member of the University of Massachusetts Graduate Program in Molecular and Cellular Biology, an extremely active program with approximately 40 faculty members and 35 graduate students. Curriculum vitae, a statement of teaching and research interests, and three letters of recommendation should be sent to: **Dr. Steven A. Williams, Chair, Search Committee, Department of Biological Sciences, Clark Science Center, Smith College, Northampton, MA 01063.** Applications should be received by 30 September 1987. *Smith College is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

JUNIOR RESEARCHER (postdoctoral), R-2, #85422, full-time, federal funds to begin 1 July 1987, 2 to 3 years, dependent on funds. Duties: Research focus on characterization and study of regulation of an avirulence gene from *Pseudomonas syringae* pv. *phaseolicola*. Minimum qualifications: Ph.D. in bacterial genetics or in a related field with substantial experience in molecular techniques. Salary: \$21,864 with full fringe benefits. Send résumé and three references to: **Dr. S. Patil, Biotechnology Program, PBRC, University of Hawaii, Honolulu, HI 96822.** Closing date: 25 June 1987.

An Equal Opportunity Employer

Associate Director Pharmacokinetics



An equal opportunity employer

Pfizer, a leading company in pharmaceutical research and innovation, has an opportunity for an experienced pharmacokineticist to join a multi-disciplinary drug development team of pharmacologists, toxicologists and clinicians in the Department of Clinical and Scientific Affairs. The successful candidate will design, initiate and monitor clinical and pre-clinical studies for pharmacokinetic, bioavailability and drug metabolism assessments. In addition, you will evaluate and summarize pharmacokinetic/pharmacodynamic data and prepare regulatory submissions. As pharmacokineticist, you will review pre-clinical and clinical data on drugs undergoing licensing evaluation and screen research proposals for scientific interest to Pfizer. Involves approximately 5-10% international travel.

The successful candidate will possess a PhD in Pharmaceutical Sciences or a Pharm D with 5-8 years of experience in pharmacokinetic/biopharmaceutics. You should be a self motivator with excellent interpersonal, analytical, organizational and oral and written communication skills.

Explore this exceptional career prospect with Pfizer which includes competitive salary commensurate with experience, outstanding benefits and ample opportunity for professional growth. Send your resume with salary history to: Cathlin L. Green, Senior Personnel Associate, Pfizer Inc., 235 East 42nd Street, New York, NY 10017. Only candidates with appropriate backgrounds will be considered. No telephone inquiries accepted.

Molecular Virologist

A position is available in Wyeth's expanding recombinant vaccine program. A Ph.D. in Microbiology, Biochemistry, or Molecular Biology is required with strong post-doctoral experience in molecular virology of animal DNA viruses or retroviruses. The successful candidate should be highly skilled in virology with special emphasis in molecular genetics and recombinant DNA technology.

You will enjoy working in our modern, well-equipped facilities in Philadelphia's prestigious Main Line suburban area. Besides an environment which fosters discovery, we offer a competitive salary, excellent benefits, and superior career opportunities.

Respond immediately by forwarding your CV and salary requirements, in confidence, to: **Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V responses encouraged.

Wyeth Laboratories



POSITIONS OPEN

INSECT BIOCHEMIST. Department of Biochemistry, University of Nevada invites applications for 12-month tenure-track faculty position (assistant, associate, or full professor). Position is part of the University's commitment to build quality programs in selected areas and is enhanced by a recently awarded NSF-EPSCoR grant to strengthen programs in insect biochemistry and plant molecular biology. Position is primarily a research position, with an opportunity for developing courses in the resident instruction program. Successful candidate is expected to build a quality, extramural funded research program. Send curriculum vitae, brief statement of research interests, names, addresses, and telephone numbers of three references to: **Dr. Gary Blomquist, Biochemistry Department, University of Nevada, Reno, NV 89557.** Application deadline 1 September 1987. *Equal Opportunity Employer/Affirmative Action.*

UNIVERSITY OF QUEENSLAND *Equal Opportunity in Employment is University Policy*

LECTURESHIPS (2) IN PHYSIOLOGY OR PHARMACOLOGY, DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

A higher degree and/or professional qualifications are required as well as significant postdoctoral research experience in physiology or pharmacology. Preferred areas of research are (i) neuroendocrinology, neuropharmacology, membrane physiology, (ii) cardiovascular or renal regulating mechanisms, departmental research interests include vision and hearing, comparative reproduction, hormonal receptors, cardiovascular-renal control, blood groups, liver toxicology, pulmonary and vascular pharmacology, cardiovascular-drug interactions. Closing date: 2 July 1987. **Reference No. 21887.**

Salary per annum: Associate Professor: \$A49,268. Senior Lecturer: \$A37,381 to \$A43,568. Lecturer: \$A27,859 to \$A36,600.

Additional information and application forms are available from: **The Director, Personnel Services, University of Queensland, St. Lucia 4067, Queensland, Australia.**

MEDICAL ONCOLOGIST—Yale University School of Medicine Section of Medical Oncology, Assistant/Associate Professor level. Commitment and experience in both basic and clinical research required. Specific interest in molecular pharmacology or immunology preferable. Submit curriculum vitae to: **William N. Hait, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.* Deadline for application is 19 June 1987.

MEDICAL ONCOLOGIST—Yale University School of Medicine Section of Medical Oncology, Assistant/Associate Professor level. Commitment and experience in both basic and clinical research required. Specific interest in the regulation of cellular proliferation and differentiation by oncogenes with expertise in the use of in situ hybridization techniques. Submit curriculum vitae to: **William N. Hait, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.* Deadline for application is 19 June 1987.

MEDICAL ONCOLOGIST—Yale University School of Medicine Section of Medical Oncology/Assistant—Associate Professor level. Commitment and experience in both basic and clinical research required. Specific interest in immunologic typing of leukemias and the pharmacological approach to cellular differentiation. Submit curriculum vitae to: **William N. Hait, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.* Deadline for application is 19 June 1987.

MEDICAL ONCOLOGIST—Yale University School of Medicine Section of Medical Oncology—assistant/associate professor level. Commitment and experience in both basic and clinical research required. Specific interest in molecular mechanisms of drug resistance and the potential and use of bone marrow transplantation in overcoming this problem. Submit curriculum vitae to: **William N. Hait, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.* Deadline for application is 19 June 1987.

POSITIONS OPEN

The Department of Neurosciences, University of California, San Diego, is seeking applicants for a position as **MEDICAL FELLOW** in Alzheimer's disease doing dementia-related research and diagnostic and quantitative histopathology. The successful candidate will be Board-eligible or certified in neuropathology. California license not required. Salary range: \$30,000 to \$36,000 per year. Position opens 1 November 1987. Send curriculum vitae/bibliography and letters of reference by 1 July 1987 to: **Robert D. Terry, M.D., University of California, San Diego, Department of Neurosciences (M-024), La Jolla, CA 92093.** *The University of California is an Affirmative Action/Equal Opportunity Employer. Minority and women candidates are encouraged to apply.*

POSITIONS OPEN

MICROBIOLOGIST/FISH DISEASE RESEARCH. Research assistant to assist in a project concerning fish pathogens at Hatfield Marine Science Center, Newport, Oregon, and the Department of Microbiology, OSU, Corvallis. Require B.S. in microbiology with experience in pathogenic bacteriology, virology, immunology, and production and testing of monoclonal antibodies. Full-time for 2 years starting 1 July 1987. Send letter of application, résumé, and three references before 15 June 1987 to: **Dr. J. S. Rohovec, Department of Microbiology, Oregon State University, Corvallis, OR 97331-3804.** *OSU is an Affirmative Action/Equal Employment Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

BIOTECHNOLOGY— OPPORTUNITIES—

Molecular Diagnostics, Inc., and Molecular Therapeutics, Inc., are biotechnology research groups affiliated with Bayer AG of West Germany and its subsidiary, Miles Laboratories, Inc. The companies function as basic research institutes, each guided by an internationally recognized Scientific Board. Areas of research include molecular and cellular genetics, nucleic acid chemistry, immunology, and protein chemistry. Both companies are expanding their scientific staffs, and offer outstanding opportunities for scientists and technicians with appropriate qualifications.

SENIOR SCIENTISTS

Minimum requirements are a Ph.D. and 2 years of postdoctoral training. Experience in molecular biology or molecular genetics of mammalian cells is preferred. Candidates will be expected to work independently on projects involving isolation and analysis of mammalian genes at all levels, including cloning and sequencing, analysis of expression, and gene transfer.

RESEARCH ASSOCIATES

Applicants must have a BS or MS degree and at least 1 year experience. Proficiency in recombinant DNA techniques is desirable.

The two companies are located in adjoining facilities in a sizable, attractive, and well-equipped facility near New Haven and Yale University, and midway between Boston and New York City. MDI and MTI offer competitive salaries, excellent benefits, and a stimulating and challenging work environment.

Applicants should forward a curriculum vitae along with a statement of research interest and capabilities in confidence to: **Research Director, Molecular Therapeutics, Inc./Molecular Diagnostics, Inc., 400 Morgan Lane, West Haven, CT 06516.**



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A Commitment to Excellence

The leadership enjoyed by our GIBCO/BRL product lines in the molecular and cell biology industries are evidence of our commitment to excellence.

As a division of Life Technologies, Inc., we have immediate openings for:

- **Molecular Biologist** — Ph.D. or M.S. degree in related field to do non-radioactive DNA detection and DNA-based diagnostic product development and/or *in situ* methodology.
- **Histochemist** — Ph.D. or M.S. degree in related fields to develop *in situ* hybridization methodology.
- **Assay Design Engineer** — Ph.D., M.S. or B.S. degree in related field with extensive diagnostic development experience to work on user friendly DNA based diagnostic product formats.
- **Biochemist** — M.S. or B.S. degree in related field to do quality control of molecular biology and immunology product lines and/or production of phenol and formamide.

Our competitive salary and benefits combined with our geographic location make for a desirable atmosphere to build your career.

Other scientific positions are available.

Please submit your curriculum vitae to:

Mr. Richard L. Hotaling, Jr.
Personnel Manager
Life Technologies, Inc.
8717 Grovemont Circle
Gaithersburg, MD 20877

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Integrated Genetics has established a leadership position in the biotechnology industry by providing innovative products utilizing advanced genetic engineering technology. The products being developed include cardiovascular proteins, animal and human fertility hormones, blood cell growth factors, and a hepatitis B vaccine. In addition, we have established the first commercial reference laboratory in the United States for the detection of genetic diseases.

IG looks for excellence in its staff and welcomes applications from scientists with a proven track record of outstanding research in a broad range of areas. Minimum requirements for the following positions are a PhD and 2 years' postdoctoral experience with additional relevant industrial experience preferred. Many positions, in addition to these, are also currently available.

GENETIC DISEASES/GENETIC REFERENCE LABORATORY

IG supports a major research effort in the cloning of genes associated with particular diseases, including cystic fibrosis. **STAFF SCIENTISTS** are needed in the area of population genetics to examine genetic components in risk factors; particularly for cardiovascular and neurological diseases and cancer. The **GENETIC REFERENCE LABORATORY** also has an opening for a **LABORATORY DIRECTOR**. An MD/PhD, background in DNA research, and supervisory experience in a commercial laboratory setting required.

PROTEIN CHEMISTRY

Positions available in **PROTEIN PURIFICATION**, especially large-scale column chromatography; **PROTEIN SEQUENCING**; **PROTEIN ENGINEERING**, involving recombinant techniques; **PROTEIN CHARACTERIZATION** and **SPECIFICATION**; **CARBOHYDRATE ANALYSIS**, applied to glycoproteins; **PROTEIN MODELING** using computer-assisted systems; and **RECEPTOR PROTEIN STUDIES**, involving characterization of membrane proteins.

EXPRESSION

The mammalian expression group is focused on high level expression of cloned genes in eukaryotic systems with the goal of producing large amounts of biologically active and structurally faithful proteins. Openings exist for **STAFF SCIENTISTS** with expertise in **CELL BIOLOGY**, **TRANSGENIC ANIMALS** and **CHIMERIC** or **HUMAN MONOCLONAL ANTIBODY ENGINEERING**.

BIOENGINEERING

Bioengineering develops processes for the efficient production of therapeutics using large-scale mammalian tissue culture at our new GMP pilot production facility. Openings exist for experienced staff to work in the **SCALE-UP OF MAMMALIAN TISSUE CULTURE** processes and the engineering aspects of **LARGE-SCALE PROTEIN PURIFICATION**.

DISCOVERY

The Discovery Program has the aim of examining, in the broadest sense, other applications of our technology to the production of healthcare products. **STAFF SCIENTISTS** are needed with the ability to discover new research areas and new therapeutic proteins. A broad knowledge of **SCIENCE** and **MEDICINE** and extensive contacts within academia are essential.

LABORATORY SERVICES

A **MANAGER** is needed for the Laboratory Services Department which provides DNA sequencing, DNA synthesis, analytical chemistry, and assay development services. Requires several years' experience running a service facility providing the above services and a strong knowledge of molecular biology and immunoassay development.

Integrated Genetics offers an attractive compensation and benefits package, including equity participation. For consideration for any of the above opportunities, please send your resume to: David Nikka, Human Resources, Dept. S65, Integrated Genetics, Inc., 31 New York Avenue, Framingham, Massachusetts 01701.

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INTEGRATED GENETICS



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**Richard M. Furlaud,
Chairman and Chief Executive Officer
Squibb Corporation**

The Squibb Institute for Medical Research is continuing to expand the application of molecular biology techniques to virtually all areas of drug discovery. This expansion has created exceptional opportunities for scientists who possess expertise in the analysis and expression of genes, eukaryotic and prokaryotic systems, enzymology, protein isolation, receptor studies, and glycosylation.

Our scientific investigations encompass the areas of genetic engineering, virology, metabolic diseases, monoclonal antibodies and gene amplification as well as other emerging biotechnology disciplines. Our commitment to advanced research and development is evidenced by our establishment of a state-of-the-art molecular virology laboratory. We also anticipate that research and development expenditures will grow by more than 20% per annum through the foreseeable future.

The Squibb Institute for Medical Research supports innovative research efforts, and encourages the presentation of results in scientific publications and professional meetings. Our research laboratories are located in pleasant, semi-rural settings convenient to New York, Philadelphia, the Jersey Shore and the Pocono mountains.

In addition to those candidates who are immediately available for employment, we encourage response from individuals who will be completing their post-doctoral fellowships in 1988 and beyond. Please submit your curriculum vitae, in confidence, to: **Corporate Employment Manager, Human Resources Department #100, The Squibb Institute for Medical Research, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



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POSITIONS OPEN

MICROBIOLOGIST FULL PROFESSOR AND CHAIR

The University of California at Davis invites applications and nominations for Chairperson of the Department of Bacteriology. Candidates must have active research programs with outstanding records of research achievement in prokaryotic physiology/genetics. The chairperson will be responsible for providing academic and administrative leadership to promote the research and teaching excellence of the Department.

The Department offers undergraduate degrees, and serves as the administrative core of the graduate group in microbiology, a campus-wide unit which offers master's and Ph.D. degrees. With anticipated new positions, the departmental faculty will build on its traditional strength in prokaryotic physiology/genetics while expanding in eukaryotic microbiology.

For the initial application, candidates should submit curriculum vitae, a synopsis of their current research program (including present and pending grant support and current personnel), representative recent publications, and a statement of teaching and administrative experience to: **Chair of the Search Committee, Department of Bacteriology, University of California, Davis, CA 95616.** Closing date: Open until filled, but applications must be received before 1 October 1987 to be assured of consideration. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGY Ph.D.—Assistant/associate professor in immunology. Commitment to teaching and independent/interdisciplinary research, with a focus on clinical immunology. Good verbal communication in English essential. Spanish is an advantage, but not required. Starting date preferably 1 July 1987 or later. Send résumé and three recommendation letters to: **Dr. Eli Pagan, Chairman, Microbiology Department, Ponce School of Medicine, P.O. Box 7004, Ponce, Puerto Rico 00732.** *An Equal Opportunity Employer.*

MOLECULAR BIOLOGIST

The Alton Ochsner Medical Foundation, an institution dedicated to patient care, education, and research, now seeks a staff scientist to study the molecular biology of growth regulatory proteins. Candidates must have a demonstrated proficiency in molecular cloning, DNA sequencing, and the establishment of gene libraries. A proven record of scientific accomplishment is required. Salary and benefits are competitive. For further information send a brief letter describing research goals, curriculum vitae, and the names of three references to: **Richard N. Re, M.D., Vice President and Director, Division of Research, Alton Ochsner Medical Foundation, 1516 Jefferson Highway, New Orleans, LA 70121.** *The Alton Ochsner Medical Foundation is an Equal Opportunity Employer.*

Viragen, Inc., a south Florida biotechnology company committed to the development of lymphokine and cytokines as therapeutic products, has the following positions available.

MOLECULAR BIOLOGIST: The successful candidate will possess a Ph.D. in molecular biology, or equivalent, as well as 3 to 5 years of experience in cDNA cloning and expression. The candidate should be experienced in the construction and analysis of cDNA and genetic libraries.

PROTEIN BIOCHEMIST: The individual selected will be responsible for the development of efficient procedures for the purification of therapeutic proteins from natural and recombinant DNA sources. The candidate should have training and 2 to 3 years of experience in current separation technologies including HPLC. The position requires a Ph.D. in biochemistry.

Applicants for either position should send curricula vitae to: **Director of Research, Viragen, Inc., 2343 West 76 Street, Hialeah, FL 33016.** *An Equal Opportunity Employer.*

MOLECULAR BIOLOGIST/VIROLOGIST

Lofstrand Laboratories, Ltd., has position for a Senior Molecular Biologist. The applicants must have a Ph.D. (or equivalent degree) and at least 3 years of postdoctoral research, with a strong expression system. The successful applicant will be expected to carry out independent research with outside collaborators as well as assume responsibilities as Department Head. Estimated starting date: 1 September 1987. Send curriculum vitae, list of publications, and three letters of reference to: **Lofstrand Laboratories, Ltd., 8042 Cessna Avenue, Gaithersburg, MD 20879.**

Research Scientists

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Schering-Plough is a research-driven, pacesetter in the development and application of novel therapeutic entities. As an integral part of our multidisciplinary research group, you'll be given the project responsibility, support and recognition to explore your ideas and contribute to new drug discoveries. We have immediate opportunities for highly motivated, qualified professionals in the following key roles:

■ Inflammation Research

Senior Scientist—You will assume a supervisory role on projects aimed at identifying novel therapeutic agents that can be used to effectively control tissue destructive mechanisms in rheumatoid arthritis and other chronic inflammatory diseases. Your credentials should include a PhD with 0–3 years' training and/or experience in inflammation research and a familiarity with both in-vitro and in-vivo models of inflammation.

Assistant Scientist—You will assume a key role as an assistant to a senior investigator in studying the effects of therapeutic agents in experimental models of autoimmune diseases. Your credentials should include a Bachelor's degree in biology or chemistry and experience with cell biological techniques.

Associate Scientist—You will assume a key role as an assistant to a senior investigator in evaluating the effects of drugs on the biological properties of inflammatory cells. Your credentials should include a Bachelor's degree in biology, microbiology or chemistry.

■ Chemical Research

Biochemist—Your credentials should include a PhD with 0–3 years in Biochemistry with a background in structural analysis of oligosaccharides and elucidation of glycoprotein structure-function relations. Experience in the separation and purification of oligosaccharides is also required. The successful candidate will be familiar with micro-analytical techniques, HPLC and mass spectrometry, and have a background in the application of chemical methods for carbohydrate analysis.

■ Cardiovascular Biochemistry

Postdoctoral Fellow—Opening is in the Department of Pharmacology, Section of Cardiovascular Biochemistry. The selected candidate will study enzymes involved in degradation of vasoactive peptides. The position requires skill in HPLC separation of proteins and peptides, and familiarity with protein isolation techniques.

Send resume, indicating position of interest to: Mr. Louis DeMartino, Schering-Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



Schering-Plough

FACULTY POSITION
BIOLOGY DEPARTMENT
TEXAS A&M UNIVERSITY

The Department of Biology at Texas A&M University invites applications for a FACULTY POSITION in the area of Ultrastructural Cellular and Molecular Biology. (Level of appointment depends on previous experience.) The ideal candidate would maintain a strong independent research program. Additionally, this person would provide leadership in the development of innovative approaches to ultrastructural molecular biology and provide service in the expansion of a university-wide state-of-the-art biological molecular studies using *in situ* hybridization, and light and electron microscopic immunolocalization techniques. An initial review of applicants will be made by June 15, 1987, but the position will remain open until filled.

Applications, including a *curriculum vitae*, a statement of research interests, and the names, addresses and telephone numbers of three references should be sent to:

Dr. Jeffrey Pommerville
Microscopy Search Committee
Chairperson
Department of Biology
Texas A&M University
College Station, TX 77843-3258

Texas A&M University is an Affirmative
Action/Equal Opportunity Employer

STAFF SCIENTISTS MARINE MOLECULAR BIOLOGY

Staff scientist positions (tenure track) are available at the University of Maryland Center for Marine Biotechnology. Staff scientists will join research groups with interests centering on (1) control of growth, development and reproduction of finfish and shellfish, (2) molecular biology and molecular genetics of marine bacteria, especially those from extreme habitats, and (3) molecular biology of marine algae.

We are particularly interested in applicants who wish to pursue both independent and collaborative research in the following areas in marine molecular biology, although outstanding scientists with research interests outside these areas are encouraged to apply:

- Molecular biology of growth hormones and growth factors (or other areas of reproduction, development or growth) in marine finfish and shellfish.
- Physiology or biochemistry of reproduction, development or growth of marine organisms
- Molecular biology and molecular genetics of marine bacteria (preference will be given to someone with expertise with high pressure systems)
- Molecular biology and molecular genetics of marine algae

Joint appointments with appropriate departments at the University of Maryland will be pursued. All joint appointees will be expected to participate in departmental duties, including the teaching and graduate training programs of the allied departments. All staff scientists will be expected to develop and maintain active research programs in marine molecular biology by securing funds from external sources.

Located in the Inner Harbor section of Baltimore, Maryland, the Center of Marine Biotechnology is well-equipped with state-of-the-art facilities for cellular and molecular studies. A large training grant in marine molecular biology supports pre and post doctoral fellows and provides limited faculty support.

For best consideration, letters of application, including curriculum vitae, a statement of research interest, names and addresses of three references should be sent by August 1, 1987. CENTER OF MARINE BIOTECHNOLOGY, Search Committee, University of Maryland, 600 E. Lombard Street, Baltimore, MD 21202 EOE

Medicinal Chemist

The Medicinal Chemistry Department of Smith Kline & French Laboratories seeks an outstanding organic chemist to work in a state-of-the-art research facility in the Philadelphia suburbs, near Valley Forge. The selected individual will assist in the design and synthesis of receptor antagonists and molecules destined to interrupt enzymatic processes. Experience in synthetic organic chemistry is essential.

The successful candidate will possess the following:

- B.S. or M.S. in Chemistry or equivalent experience.
- Excellent working knowledge of reaction mechanisms.
- Skill in modern methods of isolation and purification of reaction products.
- Experience in the use of modern physical methods to determine the structure of reaction products.
- An ability to communicate results effectively.

We offer an excellent compensation, benefits and relocation package as well as the opportunity for personal and professional growth. For confidential consideration, send your C.V. and names of three references to Mr. Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation 1552 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
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SANDOZ, a leading pharmaceutical company based in Switzerland, and well established in endocrine therapy, has an opening in the Preclinical Research Department, Basle, for a well-qualified

PHARMACOLOGIST OR PHYSICIAN

to work on the development of new drugs for the treatment of *endocrine disorders*.

The successful applicant will take charge of a laboratory working within an interdisciplinary group in the endocrinological research unit and ideally should also be capable of taking over the leadership of such a group within the relatively near future. He or she should be familiar with, and capable of setting up, both biochemical and animal models of endocrine disorders.

In addition to qualifications in experimental pharmacology or physiology (Ph.D. or M.D.), applicants should thus have postdoctoral and (possibly) industrial experience, a broad knowledge of endocrinology, and proven or potential ability to lead a small group of research scientists.

SANDOZ offers a scientifically attractive working atmosphere, well-equipped laboratories, and the opportunity both to publish the results of original research and to attend scientific meetings.

Applications, which will be treated in strict confidence, should be accompanied by a *curriculum vitae* and list of publications and addressed to:

Sandoz Ltd.
Personnel Department, Ref. 7108
CH-4002 Basle, Switzerland



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Success in a number of diverse product lines has resulted in continued growth and another successful year for Abbott Laboratories. Named by Dun's Magazine as one of the five best managed companies in 1986, Abbott's research, planning and efficient operations have enabled us to expand in both domestic and world markets. Our Chemical and Agricultural Products Division has been a vital component in our success story and we anticipate continued growth and opportunity in this division. A market leader in biological pesticides and plant growth regulators, we are aggressively developing new approaches to solving the agricultural challenges of the future. We now have a number of significant scientific opportunities in our agricultural R&D section.

GROUP LEADER Plant Science Research & Development

The successful candidate will have a Ph.D. in Botany, Agronomy, Horticulture or other plant science and have 5-7 years R&D experience. Strong scientific credentials in such fields as plant growth regulators, plant disease, and crop yield enhancement are essential. Demonstrated ability to manage scientists and familiarity with commercial aspects of plant science are vital. This individual will lead a group of R&D Scientists in the areas of plant growth regulators and plant pathogen control. Responsibilities will include project evaluation, advising on experimental approaches, and long range research planning for this group. Other diverse responsibilities include liaison with academic and industrial scientific communities, overseeing the development of scientific personnel, and planning and evaluating capital expenditures within the department. **Reply to Job #1.**

MOLECULAR BIOLOGIST/ BIOCHEMIST Agricultural Products Research and Development

The successful candidate will have a Ph.D. in Molecular Biology or Biochemistry and have a MINIMUM 2 years postdoctoral experience. Experience in microbial insecticides or related areas is vital and industrial experience would be a plus. This position will offer significant

new challenges in the development of microbial pesticides and other agricultural products based on recombinant strains. In addition to R&D functions, there will be extensive interaction with our fermentation, entomology, and regulatory affairs groups. **Reply to Job #2.**

MICROBIOLOGIST

We are seeking an individual with an M.S. in Microbiology, Plant Pathology or related field with at least 2 years experience in general microbiology and mycology. Experience in fermentation recovery, characterization of microbial products and/or plant pathology is desirable. This position will assist in the development of biological or biologically sourced pesticides and plant growth regulators. The position will also assist with the maintenance of cultures, fermentation of microbial products and the evaluation of product candidates. **Reply to Job #3.**

DEVELOPMENT SCIENTIST

We are seeking an individual with an MS and 2 years experience or a BS with 3-5 years experience in plant physiology or biochemistry. This individual will assist our agricultural R&D section with a wide variety of research and development activities in both the laboratory and the greenhouse. Experience with laboratory instrumentation such as HPLC, GC, Spectrophotometer, and Scintillation Counters would be very helpful. Prior industrial experience in the agricultural field would be a significant plus. **Reply to Job #4.**

In addition to outstanding corporate backing and our recognized scientific environment, we offer an excellent salary and benefits package including profit sharing and stock retirement plan. We are located in an attractive suburban area just 30 miles north of Chicago. **For confidential consideration, send resume, with salary history, indicating job number interested in, to: Brian McMenamin/Corporate Placement Dept. SM/6-5.** Abbott is an Affirmative Action Employer.

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MicroProbe, a DNA probe company having strong emphasis on nucleic acid chemistry, has immediate openings for Senior Scientists and Research Associates in:

Molecular Biology: cloning, sequencing, DNA hybridization and non-isotopic signal development.

Microbiology: culture and screening of aerobic and anaerobic human pathogenic bacteria.

Product Development: assay design and optimization for viral and microbial diagnostic products.

Senior Scientists will have a Ph.D. with experience beyond post-doctoral training. Research Associates will have an M.S. or a B.S. plus two years of experience.

MicroProbe is located in suburban Seattle and offers a competitive salary and benefits package, including an equity position.

Submit resume in confidence to:

MicroProbe Corporation
1725 220th Street SE, No. 104
Bothell, WA 98021

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POST-DOCTORAL POSITION—OREGON

GENE EXPRESSION IN HEMATOPOIETIC CELLS

Available July 1987. VA Medical Center and Oregon Health Sciences University (OHSU). To study the transcriptional regulation of human hematopoietic growth factor genes by stromal cells, and developmentally regulated expression of relevant cellular oncogenes in hematopoietic progenitor cells. Requires background and experience in molecular biology. Please send curriculum vitae and names of three references to: **Dr. Grover Bagby, Director, Molecular Biology Core Laboratory, VA Medical Center, 3710 SW U.S. Veterans Road, Portland, OR 97201.** *Oregon Health Sciences University is an equal opportunity affirmative action employer. Women and minorities are encouraged to apply.*

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The opportunity to do important research — work that really makes a difference. And at Cetus, you'll have that opportunity, because we're committed to pioneering work in pharmaceuticals and biotechnology. We offer you the resources to do that work — in a stimulating environment with the support of other dedicated, knowledgeable professionals.

We currently have positions available in the following areas:

PROTEIN PURIFICATION AND CHARACTERIZATION

We seek individuals at both the Senior Scientist and Associate Scientist levels. Responsibilities will include purification and characterization of native proteins from mammalian cell supernatants or recombinant proteins from eukaryotic and prokaryotic sources. You should possess a PhD or BS/MS plus extensive experience in protein isolation at the micro level, as well as HPLC, gel electrophoresis and column chromatography experience. A general knowledge of cell/molecular biology and immunology/immunochemistry is desirable to facilitate your collaboration with other project team members.

CARDIOVASCULAR RESEARCH

You will be responsible for developing in vivo models of atherosclerosis. A PhD plus 2-5 years experience with in vivo and in vitro models, mammalian cell culture, and cholesterol/lipoprotein metabolism is required.

MICROBIAL PHYSIOLOGY/ FERMENTATION

We seek Research Assistants/Research Associates to conduct small scale fermentation studies on a variety of food-related projects. Your responsibilities will include purification and characterization of bacterial fungal enzymes; assay development; and isolation of enzymes and/or reaction products via gas/column chromatography, TLC and SDS-PAGE gels.

Our Assistant level requires a BS in microbial physiology or biochemistry plus 2-3 years' relevant experience, while the Associate level requires an MS plus 2 years/BS plus 4 years' experience. This experience should include TLC, GC, fermentation and enzymology. You should also be able to learn new techniques and apply them in exploratory research.

Please send your resume indicating position of interest, in confidence to:

CETUS CORPORATION
Box S65
1400 Fifty-Third Street
Emeryville, CA 94608

Equal Opportunity Employer



POSITIONS OPEN

MOLECULAR BIOLOGY HORMONES AND GROWTH FACTORS

Individuals with a strong background in molecular biology and a Ph.D. degree are invited to apply for **POSTDOCTORAL FELLOW AND/OR RESEARCH ASSOCIATE** position in an established molecular endocrinology laboratory. Projects include the study of the structure, function, and regulation of newly discovered members of the prolactin family of hormones, and pituitary growth factors. Applicants should send curriculum vitae, a brief description of their research interest, and three letters of reference to: **Dr. Henry G. Friesen, Department of Physiology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.** Both men and women are encouraged to apply. *In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.*

MOLECULAR GENETICIST/ MOLECULAR BIOLOGIST

Assistant professor or postdoctoral position available immediately in the Department of Veterinary Microbiology and Pathology at Washington State University. Candidate will have training in molecular genetics or biology and an interest in studying genetic diseases of animals. Candidate will initiate independent studies, and collaborate with a group of faculty studying genetic diseases of animals, particularly those that are models of human genetic diseases. Send statement of interest, résumé, and names of three references by 1 July 1987 to: **Dr. David J. Prieur, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, WA 99164-7040.** International candidates are requested to apply by airmail. *Washington State University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR NEUROBIOLOGIST

Postdoctoral position available for a nucleic acid molecular biologist interested in learning electrophysiology or membrane biophysics. Our laboratories pursue collaborative research on ion channels and neurotransmitter receptors. Recent studies have utilized *Xenopus* oocyte expression; but other systems are of interest as well. [See: Goldin *et al.*, *PNAS* 83, 7503 (1986); Leonard *et al.*, *J. Neurosci.* 7, 875 (1987); Lübbert *et al.*, *J. Neurosci.* 7, 1159 (1987); *PNAS* 84 (June 1987).] Please contact: **N. Davidson or H. A. Lester, Division of Biology 156-29, California Institute of Technology, Pasadena, CA 91125.** *Equal Opportunity/Affirmative Action.*

NEPHROLOGY—Division of Nephrology is seeking a **FACULTY MEMBER** (M.D. or Ph.D.) with interest and expertise in protein chemistry and cell biology. Applicants must have a serious long-term commitment to an academic career and laboratory investigation. Send curriculum vitae and letters of recommendation to: **Dr. Edward J. Weinman, University of Texas Health Science Center, P.O. Box 20708, MSB 4.130, Houston, TX 77225.** *An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

PATHOLOGIST for research and teaching in the area of genetic diseases of animals, particularly animal models of human genetic diseases. Opportunities for advancement and tenure consideration after appropriate service. Rank—open; salary is competitive and dependent upon qualifications. Requirements—D.V.M. (or equivalent) and Ph.D. with evidence of recent research productivity and training in genetic diseases in animals. ACVP Board certification, teaching experience, and demonstrated ability to conduct independent research would be advantageous. Successful candidate will develop an independent research program in genetic diseases of animals and contribute to teaching in the professional and graduate curriculum in pathology. An opportunity for a progressive scientist to interact with others in a department with strong interdisciplinary programs in genetic diseases. To apply, send curriculum vitae and names of three references before 1 July 1987 to: **Dr. David J. Prieur, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, WA 99164-7040.** International candidates are requested to reply by airmail or telephone 509-335-6077. *Washington State University is an Equal Opportunity/Affirmative Action employer. Members of ethnic minorities, women, Vietnam-era or disabled veterans, persons of disability and/or persons between the ages of 40 and 70 are encouraged to apply.*

POSITIONS OPEN

PATHOLOGIST—MOLECULAR. The Department of Pathology at the University of California, Los Angeles (UCLA) School of Medicine has a position available at the assistant professor level to start on or before 1 January 1988. Qualifications include an M.D. degree, Board eligibility or certification in anatomic and clinical pathology, eligibility for California licensure, and demonstrated research ability. Specialized training in molecular genetics and/or cell biology is required, and the individual selected will be expected to develop independent diagnostic and research programs in this area. Other duties will include teaching of undergraduate and graduate students and residents. Applications including curriculum vitae, summary of research interests, and names and addresses of four references should be sent to: **P. A. Cancilla, M.D., Chairman, Department of Pathology, UCLA School of Medicine, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.*

PLANT MOLECULAR BIOLOGIST

The College of Agriculture at the University of Nevada, Reno invites applications for a full-time (12 months) tenure-track joint appointment in the departments of plant science and biochemistry at the level of assistant or associate professor. The primary responsibility of the successful candidate will be to develop a vigorous, independently funded research program in some area of plant molecular biology. He or she will also be expected to participate in Ph.D. level graduate training and teaching. Generous set-up funds and laboratory space will be made available. A Ph.D. and postdoctoral experience in plant molecular biology is required. Applicants should submit their curriculum vitae, a statement of research interests and goals, selected reprints; and arrange to have three letters of reference sent to: **Plant Molecular Biologist Search, Plant Science Department, University of Nevada, Reno, NV 89557.** Application deadline is 1 July 1987. *The University of Nevada is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL ASSOCIATE to conduct NIH-funded research on postsynthetic modifications of proteins in diabetes and aging. Candidates with a Ph.D. in biochemistry or chemistry and a strong background in fields related to protein chemistry, analytical biochemistry, and immunochemistry are invited to send curriculum vitae, reprints, and names of references to: **Dr. Vincent Monnier, Department of Pathology, Case Western Reserve University, Cleveland, OH 44105.** *CWRU is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

Available immediately in a laboratory using combined molecular and cellular immunological approach to study (i) T-cell antigen receptor repertoire selection, and (ii) DNA virus-induced oncogenesis. Experience in molecular biology is desirable. Please send curriculum vitae and three letters of reference to: **Dr. Sueihua Pan, Department of Pathology, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School (formerly Rutgers Medical School), 675 Hoes Lane, Piscataway, NJ 08854-5635.** *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

POSTDOCTORAL FELLOW

To study the mechanism of action of toxins (bungarotoxin, notexin) which have phospholipase A₂ activity and act presynaptically to alter neurotransmitter release. This study will examine the effect of these toxins and their derivatives on membrane organization and the functional and enzymatic properties of brain synaptosomes.

Position funded for up to 7 years with a 2-year commitment on a Senator Jacob Javits Neuroscience Award. Requires Ph.D., with training preferably in isolation of subcellular components and protein and lipid biochemistry. Salary \$22,000 per year (8% increase per year).

Send curriculum vitae, arrange for three letters of recommendation to be sent by 1 July 1987 directly to: **Dr. Philip Rosenberg, Chairman, Section of Pharmacology and Toxicology, The University of Connecticut, School of Pharmacy, Storrs, CT 06268.** Telephone: 203-486-2213. *We are an Affirmative Action/Equal Opportunity Employer, M/F (Search #7A442).*

THE UNIVERSITY OF CONNECTICUT

POSITIONS OPEN

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

Immediate opening for Ph.D. or M.D. with training/research background in areas of in vivo mammalian retinal development and optic nerve regeneration. Knowledge of morphology/immunohistology, microsurgery, and immunology, is desirable. Individual with initiative and research sophistication to work in full-time basic and clinical research environment. Salaries and benefits at NIH/academic levels. Please send curriculum vitae and reference names to:

**Dr. Alan R. Adolph
Eye Research Institute
20 Staniford Street
Boston, MA 02114**

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

POSTDOCTORAL FELLOW. ESR spectroscopist with knowledge of ESR and free radical chemistry required to work in interdisciplinary cancer research lab, starting September 1987. Individual will work on free radical metabolites of antitumor agents and assist in various projects. Salary compatible with experience. Inquiries to: **Dr. Peter Gutierrez, Developmental Therapeutics, University of Maryland Cancer Center, 655 West Baltimore Street, Baltimore, MD 21201.**

POSTDOCTORAL NEUROENDOCRINOLOGIST: position available immediately for 2 to 3 years to participate in studies of the ontogeny of hypothalamic GnRH release in the monkey. Candidates should preferably have experience with either contemporary neuroanatomical techniques (immunocytochemistry, in situ hybridization, retrograde tracing) or methods used to study the physiology of neurotransmission. Send curriculum vitae and names of references to: **Dr. Tony M. Plant, Department of Physiology, University of Pittsburgh School of Medicine, 616 Scaife Hall, Pittsburgh, PA 15261.**

POSTDOCTORAL POSITION available for recent Ph.D. to study protein phosphorylation and the mechanism of action of growth factors including phosphatidylinositol turnover. Experience in protein chemistry helpful but not required. Send résumé to: **Dr. Linda Pike, Washington University School of Medicine, Howard Hughes Medical Institute, Box 8045, St. Louis, MO 63110.**

POSTDOCTORAL POSITION (NIH training grant) for 1 to 3 years available in July. The research project involves purification and characterization of the enzyme and transport components of the hepatic microsomal glucose-6-phosphatase system. Ph.D. in biochemistry or related field required with 1 to 3 years experience in membrane protein purification and reconstitution desirable. Send curriculum vitae and three reference letters to: **Dr. William J. Arion, Division of Nutritional Sciences, Savage Hall, Cornell University, Ithaca, NY 14853.** *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION—Available 1 September 1987 for biochemist or biophysicist. Project involves study of regulation of membrane channel expression. Background in microinjection, mRNA purification, molecular biological and/or patch clamp techniques. Salary \$17,000 per year minimum. Send résumé, reprints, and two names of references to: **Dr. O. P. Hamill, Section of Neurobiology and Behavior, Seeley G. Mudd Hall, Cornell University, Ithaca, NY 14853.** Applications must be received before 1 August 1987.

POSTDOCTORAL POSITION BIRD ORIENTATION AND NAVIGATION

One position available in late summer 1987, pending approval of funds, at the University of Maryland's Center for Environmental and Estuarine Studies (CEES) to investigate the effect of electromagnetic pulses (EMP) on orientation and navigation of homing pigeons. One-year initial appointment; salary is \$22,000. Please send curriculum vitae and three letters of reference to: **Dr. J. Edward Gates, Appalachian Environmental Laboratory, CEES, University of Maryland, Frostburg, MD 21532.** *An Equal Opportunity/Affirmative Action Employer.*

SCIENTIST & POSTDOCS

Genentech, Inc. is a research and development company which utilizes recombinant DNA technology to produce pharmaceutical products for the treatment of a variety of human diseases.

Protein Purification & Characterization

Working in tandem with other biochemists, you'll help develop and scale up methods for the purification/characterization of recombinant proteins and peptides to be used in human pharmaceuticals and animal health care products. Several positions are available. Some will focus on recovery processes and others will focus on rapid protein purification and characterization in conjunction with research. Knowledge of HPLC, FPLC, affinity and other protein purification/analysis techniques is essential.

Successful candidate will have a PhD in Biochemistry/Biochemical Engineering and at least 2 years relevant postdoctoral experience in academia or industry. (JG-2033)

molecular and cellular level and to study the biochemistry of signal transduction.

The successful candidate should have several years of post-graduate experience and extensive hands-on experience with cell culture, receptor binding techniques and experience with protein/receptor purification. (5000SW)

Peptide Chemistry

An individual with a strong background in organic and/or protein chemistry is sought, with a special emphasis on peptide chemistry.

The successful candidate should have several years of post-graduate experience with synthesis, purification, characterization and chemical modification of biologically active peptides. (1129)

Medicinal & Analytical Chemistry

Position will supervise the testing and release of new products for clinical trials. The candidate we seek will have creative abilities in protein/peptide characterization, and the expertise to establish and implement final product specs. This position also involves writing scientific reports in support of IND submissions, so excellent communications skills are essential.

Successful candidate will have a PhD in Biochemistry or related field and at least 2 years related experience in academia or industry. Pharmaceutical experience highly desirable. (JG-1351)

Postdoctoral Fellow Protein Biochemist

An individual with a strong background in protein biochemistry and enzymatic characterization is sought to investigate the biochemical and structural characterization of the growth factor receptors.

The successful candidate should have extensive hands-on experience with protein/receptor purification, receptor binding techniques and determination of enzymatic parameters. (5001SW)

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. Please send resume, indicating position title and number, to Human Resources Department, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080. An equal opportunity employer.

Biological Chemistry

An individual with a strong background in cell biology and protein biochemistry is sought to investigate the basic mechanisms of action of growth factors at the



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RESEARCH OPPORTUNITIES IN CANCER THERAPEUTICS

The Dow Chemical Company, in Midland, Michigan, is a recognized world leader in the chemical industry. Expanded research efforts in the area of cancer therapeutics and immunotherapy have created an immediate need within the Biotechnology Laboratory in the Central Research Department for a:

MAMMALIAN CELL BIOLOGIST

We are seeking a candidate with a Ph.D. with academic or industrial post doctoral experience for a position in a multidisciplinary group studying high density mammalian cell culture. The successful candidate will have experience in handling multiple cell lines and associated analytical techniques and will have responsibility for planning, organizing and executing a high priority program in the development of optimal culture conditions.

The above candidate must also possess strong communication skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package.

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Department M

P.O. Box 1655

Midland, MI 48641-1655



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DNAX Research Institute

Postdoctoral Fellowships in Immunology and Molecular Biology

DNAX Research Institute has postdoctoral fellowships available immediately for studies in several areas of molecular biology and immunology.

DNAX, which is completely supported by Schering-Plough Corporation, is committed to basic research in an open, academic-type of atmosphere. The Institute provides a unique structure for productive collaborations between immunologists and molecular biologists.

Two-year postdoctoral fellowships provide generous benefits and stipends ranging from \$24,000 to \$30,000. Fellows are encouraged to publish and to interact with other scientists at DNAX and at universities worldwide.

Interested applicants should send a curriculum vitae, a concise statement of research interests, and the names of three references to the Human Resources Department, DNAX Research Institute of Molecular and Cellular Biology, 901 California Avenue, Palo Alto, California 94304-1104. DNAX is an equal opportunity employer m/f/h.

Fungal Physiologist

Genencor, Inc., a firm established for the application of biotechnological research and development to the manufacturing of industrial enzymes is seeking a PhD to work in the area of fungal physiology. This position in our Development Department is involved in the development of strains and processes for the production of industrial enzymes, and will interface with Molecular Biology and Fermentation Development. The successful candidate will be responsible for developing fungal strains using classical genetics, mutagenesis and/or molecular biology techniques, optimizing potential production strains with regard to physiological factors affecting fermentor productivity, and transferring strains from research into manufacturing.

Qualified candidates will have a PhD in Genetics, Physiology or Molecular Biology pertaining to filamentous fungi and have an interest in developing processes for manufacturing purposes. Postdoctoral experience is preferred, although candidates with less experience will be considered. Communication skills, the ability to work as part of a team and technical innovation are essential in this highly visible position.

We offer an outstanding compensation and benefits package combined with the opportunity to make a significant contribution to our dynamic organization. To apply, please send your curriculum vitae with summary of research accomplishments and the names of three professional references to Pat Donchin, Recruiter, Genencor, Inc., Dept. WP, 180 Kimball Way, South San Francisco, CA 94080. An equal opportunity employer.

GENENCOR

IMMUNOCHEMIST

GENEX CORPORATION is seeking an immunochemist to participate in research programs for the development of its antibody technology. The successful candidate will have hands-on experience in the development of immuno-assays, production of anti-sera and monoclonals, purification of antibodies, excellent written and oral communication skills, and the ability to supervise the research of junior staff members.

Candidates with a Ph.D. degree and 1-2 years postdoctoral experience or an M.S. degree with more than 5 years experience are preferred. However, mature individuals with less experience but outstanding records are encouraged to apply.

GENEX CORPORATION provides an outstanding research environment in suburban Washington, D.C., and excellent salary and benefits. A curriculum vitae, together with a brief description of your scientific background and letters from three professional references should be submitted to:



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Amgen is a dynamic and fast paced organization that has become one of the world's premiere biotechnology firms. Our pioneering work in the development of products for human therapeutics, human diagnostics, animal health care and specialty chemicals, has firmly established us as an industry leader. Our rapid expansion, including the completion of a new production facility, has created a variety of immediate opportunities. If you want the kind of career opportunity, visibility and responsibility that only a rapidly growing company like Amgen can offer, consider one of the positions below.

RESEARCH SCIENTISTS

Exploratory Research: Requires a Ph.D. and at least 2-4 years of postdoctoral experience in the molecular and cellular biology of any of the following disciplines: Neurobiology, lipid metabolism, bone formation, soft tissue regeneration, hematology, endocrinology, or immunomodulators. Experience in cDNA cloning and gene expression as it relates to these disciplines is highly desirable. **Dept. 112**

Immunoassay Development: Requires a Ph.D. in Immunology and several years experience in immunoassay development and hybridoma methodology. Postdoctoral and/or industrial experience is essential. **Dept. 43**

Mammalian Expression: Successful candidates will possess a Ph.D. in Molecular Biology or a related discipline as well as 2-4 years of postdoctoral experience in cDNA cloning and/or development of mammalian expression vectors. **Dept. 111**

RESEARCH ASSOCIATES

DNA Sequencing: Requires a B.S. or M.S. in Biochemistry, Molecular Biology or a related discipline and 1-2 years of experience in DNA sequencing. **Dept. 96.**

Cell Biology: Qualified candidates will have a B.S. and/or M.S. degree with experience in the cellular and/or molecular aspects of hematopoiesis or immunological cell development. Experience with *in vivo* and *in vitro* experimental models is highly desirable. **Dept. 92**

Protein Chemistry: Candidates should possess a M.S. in Biochemistry or other relevant disciplines and have experience in the purification and characterization of proteins or polypeptides. Experience with HPLC, column chromatography, gel electrophoresis, and protein sequencing would be valuable. **Dept. 240**

Protein Development: You will participate in the analysis and characterization of protein pharmaceuticals. Should possess a B.S. or M.S. in Chemistry, Biochemistry, or a related field and 2-4 years of laboratory experience in analytical biochemistry or pharmaceutical analysis. Familiarity with modern biochemical laboratory instrumentation, computer data acquisition and processing is highly desirable. **Dept. 245**

MANUFACTURING ASSOCIATES

These positions are responsible for the start up, validation and maintenance of records and SOP's, and for the operation of production equipment under GMP conditions. Must possess a B.S. or M.S. degree in the Biological Sciences.

Biochemistry: Requires experience in large scale column chromatography and purification of proteins. Demonstrated skills in software programming as well as a mechanical aptitude are essential. **Dept. 200**

Cell Culture: Requires experience in mammalian cell culture. Experience in GMP's, aseptic processing and manufacturing plant start up desirable. **Dept. 201**

QUALITY ASSURANCE ASSOCIATES

Must possess a B.S. or M.S. in Life Sciences as well as 0-3 years of Q.A. experience in a pharmaceutical manufacturing environment or related industry. Familiarity with GMP/GLP regulations on parental products is desirable. **Dept. 202**

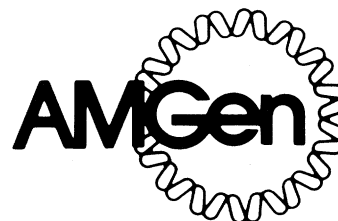
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POSITIONS OPEN

POSTDOCTORAL POSITIONS (TWO). Available 1 July 1987 for biochemical and biophysical studies of blue-light responses (viz. phototropism) in wild-type and behavioral mutant strains of the fungus *Phycomyces*. Techniques include differential spectrophotometry, FPLC, and two-dimensional gel electrophoresis. Send curriculum vitae and three letters of reference to: **Professor Edward Lipson, Department of Physics, Syracuse University, Syracuse, NY 13244-1130. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION. Anticipated position available 1 September 1987. General area, biosynthesis of vitamin K (menaquinone) in bacteria. Specifically, amplification, isolation, and purification of pathway enzymes, study of regulatory processes. Background in biochemistry, enzymology, or molecular biology is desirable. Send curriculum vitae and names of three references to: **Dr. R. Bentley, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA 15260.**

POSTDOCTORAL POSITION—In anticipation of funding. Develop risk assessment based consumption advisories for sport fish, to support and complement ongoing effort in the Great Lakes region. Ph.D. in toxicology/public health (MPH desirable). Experience with human health risk assessment required. Send résumé and names of three references to: **Dr. Jeffery A. Foran, Great Lakes Natural Resource Center, 802 Monroe, Ann Arbor, MI 48104. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available after 1 July 1987 to study the molecular genetics of murine adenovirus. Experience in molecular biology or cell biology desired. Good opportunity to apply molecular biology to viral pathogenesis. Send curriculum vitae and names and phone numbers of three references to: **Dr. Katherine Spindler, Department of Genetics, University of Georgia, Athens, GA 30602. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN PSYCHOPHARMACOLOGY

Multiyear NIDA-funded position available immediately to study drugs of abuse, neurotransmitters, and behavior. Experiments are directed toward simultaneous recording of drug self-administration and in vivo voltammetry. Experience in either research area is desirable. Send curriculum vitae, summary of research experience, and names and addresses of three references to: **Dr. Martin D. Schecter, Professor/Chairman, Department of Pharmacology, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, OH 44272. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN SAN FRANCISCO BAY AREA available 1 June 1987, to study phospholipase A2 structure/function using site-directed mutagenesis and heterologous expression of cloned pancreatic PLA2 in active recombinant DNA lab. Contact: **Dr. Corey Largman, Martinez V.A. Hospital, 150 Muir Road, Martinez, CA 94553; telephone: 415-228-6800 extension 474.**

POSTDOCTORAL POSITION— SAN FRANCISCO AREA

Available 1 July 1987—to study oncogene expression and other molecular events in early differentiation of hematopoietic cells in active recombinant DNA laboratory. Contact: **H. Jeffrey Lawrence, M.D., Assistant Professor of Medicine, University of California Davis, Assistant Chief of Hematology/Oncology, V.A. Medical Center, 150 Muir Road, Martinez, CA 94553. Telephone: 415-228-6800, extension 681.**

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1987

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These NRC-Department of the Army Research Associateships are awards which provide opportunities for research on problems of individual choice to scientists and engineers of unusual ability and promise. Programs are open to U.S. citizens only. Awards are on a competitive basis. Initial awards are for one year with the possibility of renewal.

The National Research Council is accepting applications for its 1987 Resident Research Associateships that will provide opportunities for postdoctoral and senior scientists to conduct experimental and theoretical research in the areas of:

- ATMOSPHERIC PHYSICS
- ORGANIC CHEMISTRY
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- LASER SPECTROSCOPY
- MOLECULAR PHYSICS
- CHEMICAL SYNTHESIS
- SURFACE AND COLLOID CHEMISTRY
- ELASTIC-PLASTIC STRAIN & INTERNAL STRESS
- ENZYMATIC RESEARCH
- SPECTRAL ANALYSIS
- RAPID-SOLIDIFICATION TECHNOLOGY
- FLUID MECHANICS
- AUTOMATED TARGET RECOGNITION
- ARTIFICIAL INTELLIGENCE & CONTROL
- NONLINEAR BEHAVIOR OF METALLIC MATERIALS

DEADLINES:

Applications must be postmarked on or before August 15, 1987. Supporting documents must be received by October 1, 1987. Awards will be announced in early November 1987

FOR INFORMATION, WRITE TO:

**ASSOCIATESHIP PROGRAMS (JR610-E1)
NATIONAL RESEARCH COUNCIL
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RESEARCH SCIENTISTS

Investigate GENELABS, a young, well-financed and promising biotechnology company, entering the diagnostic and therapeutic health care fields. We have a powerful team of scientific and business professionals in place and seek outstanding scientists for our growing research staff.

MOLECULAR BIOLOGIST: The successful candidate will possess strong research capabilities in library construction and screening using phage and plasmids. Background in gene expression also important. Ph.D. degree with 3 years of related experience.

MOLECULAR/CELLULAR IMMUNOLOGISTS: Exceptional background required in human and murine cell culture, lymphokines, functional immune assays, hybridoma research and T-cell cloning techniques. M.D., Ph.D. degree or equivalent with 3 to 5 years relevant experience required.

*Opportunities are also available for qualified Research Assistants in support of the above areas of research.

We are located in beautiful new laboratories near the San Francisco Bay. Please forward CV and names of 3 references in confidence to: **GENELABS INCORPORATED**, 505 Penobscot Drive, Redwood City, CA 94063. An equal opportunity employer.



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Research Scientists

Triton Biosciences Inc., an entrepreneurial subsidiary of Shell Oil Company, is an emerging biotechnology company engaged in the development of diagnostics and therapeutics for human health care. Our company is built upon a strong base of research expertise, solid support, and responsive management. We currently have several excellent opportunities in our Molecular & Cell Biology Department for innovative scientists with 2-4 years post doctoral work or industry equivalent. A working knowledge of tumor cell biology and animal model system is desirable.

Immunology

Candidates must have direct experience in the isolation and characterization of cells of the immune system and the characterization of immune system growth factors.

Cell Biology

Candidates should have excellent experience in the characterization of cell growth factors and in setting up of complex biological assays to isolate and quantitate such growth factors.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits including relocation assistance. For prompt consideration, please forward your C.V. along with salary requirements and the names of three references to: Triton Biosciences Inc., Box JJM, 1501 Harbor Bay Parkway, Alameda, CA 94501. U.S. Citizenship or permanent visa required. An Equal Opportunity Employer.



Triton Biosciences Inc.

RESEARCH MANAGER - BIOCHEMISTRY

The Office of Naval Research is seeking a highly qualified individual to plan and manage an external contract research program in biochemistry at the molecular level. The sponsored research is conducted primarily at universities and government or industrial laboratories by leading scientists in the field. This is a Civil Service position at the GM-13, 14 or 15 grade level (\$38,727-\$69,976), depending on qualifications.

The successful candidate will conceive, organize and direct research and development programs in biochemistry with emphasis on macromolecular structure and function, enzymology, molecular recognition of biological molecules, and design and synthesis of biomaterials. 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 to 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 biochemistry or a related field 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, Code 01242P

ATTN: Announcement #87-49 (S)

800 North Quincy Street

Arlington, VA 22217-5000

Applications will be accepted through 17 July 1987 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.

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POSITIONS OPEN

POSTDOCTORAL POSITION—Available 1 September 1987 or thereafter, to study effects of oncogenes transfected into human epithelial cells on the mechanisms regulating their growth and differentiation in vitro and in vivo. This project will employ techniques of cell culture, plasmid construction, DNA transfection, in situ hybridization, immunohistology, and epidermal cell xenografting on athymic mice. The applicant should have a recent Ph.D. with a strong background in molecular genetics, somatic cell genetics, or epithelial cell biology. Joint appointment will be held in an appropriate department at Harvard Medical School. Send curriculum vitae, summary of research and course experience, thesis abstract, and the names and addresses of three references to: **Dr. James G. Rheinwald, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION is available 1 September 1987 to study transcriptional activation in the two-cell mouse embryo and protein phosphorylation in the preimplantation embryo. Background in molecular biology is preferred, and a willingness to learn cell biological, biochemical, microinjection, and nuclear transfer techniques. Send curriculum vitae and names of three references to: **Dr. Richard Schultz, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104. Telephone: 215-898-7869.**

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION—available in private laboratory to develop hematopoietic colony assays, stem cell assays, and bone marrow cryopreservation techniques. Cytogenetics experience extremely helpful. Send inquiries and curriculum vitae to: **Dr. Michael E. Trigg, Molecular Medicine, Inc., 5606 Shields Drive, Bethesda, MD 20817.**

POSTDOCTORAL POSITION available immediately to study regulation of murine retrovirus gene expression and virus-mediated tumorigenesis using a mouse model system. Experience in recombinant DNA techniques and cell/tissue culture desired. Send résumé and names of three references to: **Dr. Arifa S. Khan, NIAID, Laboratory of Molecular Microbiology, National Institutes of Health, 9000 Rockville Pike, Building 5, Room B1-33, Bethesda, MD 20892. U.S. citizenship required. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION available in September for recent graduate with background in parasitology. Study of trematode reproductive biology and host-parasite relations, including effects of host hormones. Emphasis on sex-specific development and maturation in schistosomes. Relevant laboratory skills required. Send résumé, a statement of personal interests and goals, and names of three references to: **Dr. Paul F. Basch, Room S-142, School of Medicine, Stanford University, Stanford, CA 94305.**

POSTDOCTORAL POSITION available July 1987 for a person with a doctoral degree (Ph.D. or D.V.M.-Ph.D.) in immunology, immunogenetics, biochemistry, or molecular biology. Studies involve the genetic mechanisms of immune regulation in ruminants. Applicants must be citizens or permanent residents of the United States. Send curriculum vitae, three letters of recommendation, and outline of career objectives beginning 19 June 1987 to: **Dr. W. C. Davis, Department of Veterinary Microbial Pathology, College of Veterinary Medicine, Washington State University, Pullman, WA 99164-7040. Washington State is an Equal Opportunity/Affirmative Action Employer.**

SIGNAL TRANSDUCTION

POSTDOCTORAL POSITION available at the University of Chicago to join group investigating the cell biology, biochemistry, and molecular biology of growth factor receptors, novel tumor promoters, and related signal transduction pathways. Experience in protein analysis and/or recombinant DNA techniques highly desirable. Send curriculum vitae and names of three references before 1 September 1987 to: **Dr. Marsha R. Rosner, Massachusetts Institute of Technology, E18-564, 50 Ames Street, Cambridge, MA 02139.**

POSITIONS OPEN

POSTDOCTORAL POSITION to study the control of differentiation in normal human keratinocyte progenitor cells and murine mesenchymal stem cells, and the mechanisms by which differentiation-dependent processes prevent neoplastic transformation by induction of anticancer/cancer suppressor activity. The following references serve as the basis for these studies: Scott and Maercklein, *PNAS* **82**, 2995 (1985); Wille and Scott, *Int. J. Cancer* **37**, 875 (1986); Wier and Scott, *J. Cell Biol.* **102**, 1955 (1986); Wille, Pittelkow, Shipley and Scott, *J. Cell. Physiol.* **121**, 31 (1984). Position requires experience in cell biology and cell culture; expertise in molecular biology and/or protein chemistry also is highly desirable. Available in late 1987 or early 1988. Send curriculum vitae and three letters of recommendation to: **Robert E. Scott, M.D., Head, Section of Experimental Pathology, Mayo Clinic/Foundation, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION—IMMUNOLOGY

A postdoctoral position is available immediately requiring a Ph.D. in the biological sciences and a strong background in immunochemistry to study the somatic and surface antigens of protozoan parasites of livestock. Expertise in immunochemistry of surface molecules and protein purification is preferred. Salary range is from \$22,000 to \$25,000 per year, depending upon the qualifications of the individual. Send curriculum vitae and the names and addresses of three references to: **Donald E. Burgess, Ph.D., Veterinary Research Laboratory, Montana State University (MSU), Bozeman, MT 59717, postmarked no later than 22 June 1987. MSU is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION FOR ELECTRON MICROSCOPIST. Work with interdisciplinary group pursuing basic mechanisms of mechanical transduction in membranes. Familiarity with either cytoskeleton, immunohistochemistry, cryotechniques, or high voltage microscopy is essential. Send curriculum vitae and references to: **Dr. Frederick Sachs, Biophysics, SUNY Medical School, 105 Parker Hall, Buffalo, NY 14214. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY

To understand translation initiation mechanism in mRNAs of RNA viruses. Candidates with experience in virology and molecular biology will be preferred. Send résumé and names of three references to:

**Dr. Kailash K. Gupta
Department of Immunology/Microbiology
Rush Medical Center
1653 West Congress Parkway
Chicago, IL 60612**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL IN MOLECULAR VIROLOGY. Research on gene expression and the molecular basis of pathogenicity in adenovirus. Submit curriculum vitae to: **Dr. William Wold, Institute for Molecular Virology, St. Louis University School of Medicine, 3681 Park Avenue, St. Louis, MO 63110. Equal Opportunity Employer. M/F/V/H.**

POSTDOCTORAL POSITION—Division of Endocrinology and Metabolism, University of California, San Diego—available July 1987 to investigate the structure and function of insulin receptors in the central nervous system. Experience in protein chemistry, developmental neurobiology, and molecular biology is desirable. Send curriculum vitae, outline of research goals, three letters of reference, and reprints to: **Dr. Kim A. Heidenreich, University of California, San Diego, M-023E La Jolla, CA 92093.**

POSTDOCTORAL POSITION available to study the regulation of expression of mammalian genes, using molecular biology techniques. The research will focus on the DNA-protein interactions of the regulated genes. Candidates with training in biochemistry should send curriculum vitae and names of three referees to: **Dr. Amy Lee, Department of Biochemistry, NOR 506, University of Southern California School of Medicine, Los Angeles, CA 90033.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS available at the University of Pennsylvania in two research areas: (i) Role of cell-cell communication in *Drosophila* embryo pattern formation. (ii) DNA bending and DNA secondary structure in mammalian centromere function. Send curriculum vitae and three references to: **Dr. Cecilia Lo, Biology Department/G5, University of Pennsylvania, Philadelphia, PA 19104.**

POSTDOCTORAL POSITIONS are available in three research areas: (i) the molecular biology of gene regulation, high frequency transposition and developmental timing in *Dictyostelium*, (ii) the regulation of cell motility and chemotaxis at the behavioral and molecular level in *Dictyostelium* or (iii) the molecular biology of genetic transposition and high frequency phenotypic switching in *Candida albicans*. Send curriculum vitae and names of two references to: **Dr. David R. Soll, Department of Biology, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS—MOLECULAR VIROLOGY. The Lineberger Cancer Research Center of the University of North Carolina at Chapel Hill.

A coordinated program for study of viruses associated with cancer and with AIDS at the Lineberger Cancer Research Center, with training for qualified applicants. Fellows benefit from collaborations among these laboratories plus organized core facilities and interactions with other programs and virologists. Write any of the faculty listed for information. *Affirmative Action/Equal Opportunity Employer.*

Eng-Shang Huang: Mechanisms of transformation by human cytomegalovirus, transactivation of human immunodeficiency virus (HIV), antiviral drugs.

Joseph S. Pagano: Molecular basis of Epstein-Barr viral latency, interactions with HIV, antiviral drugs.

Nancy Raab-Traub: Transformation by Epstein-Barr virus, oncogene activation and molecular pathobiology; EBV transcription.

Ronald Swanstrom: HIV replication; interaction between retroviruses and the host genome.

Lineberger Cancer Research Center, 237H, University of North Carolina, Chapel Hill, NC 27514.

POSTDOCTORAL POSITIONS immediately available for recent (within the past 36 months) doctoral degree recipients to investigate cellular and molecular mechanisms of respiratory epithelial cell proliferation, differentiation, carcinogenesis, and oncogenesis using in vitro and in vivo approaches. First-year annual stipend of \$20,000 plus health insurance and relocation allowance. U.S. citizenship or permanent residency required. Contact: **Personnel Unit, Lovelace Inhalation Toxicology, Research Institute, P.O. Box 5890, Albuquerque, NM 87185, or telephone: 505-844-9431 for application materials. We are an Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available July 1987 to investigate both the production of interleukin 1 and other immune factors and their influence upon hepatocellular function following trauma. Projects involve biochemical and physiological approaches using in vivo and in vitro systems. M.D.'s encouraged. Please send curriculum vitae and names of three references to: **Dr. John Burke, Chief of the Trauma Service, Massachusetts General Hospital, Boston, MA 02114.**

POSTDOCTORAL POSITIONS AVAILABLE

Postdoctoral positions available to study either cartilage degradation or cytokine modulation of synovial cell function. Experience in connective tissue biochemistry and tissue culture is desirable but not required. Send curriculum vitae and names of references to: **Peter J. Roughley, Ph.D., Joint Diseases Laboratory, Shriners Hospital, 1529 Cedar Avenue, Montreal, Quebec, Canada H3G 1A6.**

POSTDOCTORAL RESEARCH POSITION. We use low-light fluorescence microscopy with video image processing to study lipid phase transitions and biological membrane fusion. We have expertise in ESR and fluorescence, optics, lipid physical and organic chemistry, and biochemical methods. Programming experience helpful. Start summer 1987. Send curriculum vitae and letters of recommendation to: **Professor G. Feigen-son, Biochemistry, 254 Clark Hall, Cornell University, Ithaca, NY 14853. An Equal Opportunity/Affirmative Action Employer.**

SENIOR RESEARCH POSITION

Ph.D. in Biochemistry, Physiology or related field with strong background in membrane biochemistry. The applicant should have experience in peptide/protein isolation and characterization, protein/lipid interactions, and general physical aspects of membrane structure and function.

Position involves research in the general area of drug interactions with biological membranes and mechanisms of drug transport. Research experience in biochemical techniques appropriate for drug transport studies, especially related to peptide compounds, is desirable.

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Manager Preregistrational Affairs

A manager level position in the department of Preregistrational Affairs in SK&F Worldwide R&D has recently been created. The successful candidate will be responsible for preparing SK&F Regulatory Affairs worldwide in order to obtain clinical trials and marketing approval. This section includes information on the formulation, manufacture, analysis and stability of new drug products.

Responsibilities will include:

- Review of reports for the relevant departments for their scientific/general accuracy and completeness.
- Preparation of the pharmaceuticals section of regulatory dossiers.
- Preparation of responses to questions from SK&F Regulatory Affairs and regulatory authorities on the pharmaceuticals data.
- Advice to R&D on current worldwide regulatory requirements with respect to the pharmaceuticals data needed to obtain clinical trials approval and marketing of new drugs.
- Liaison within scientists in the SK&F Pharmaceuticals department and SK&F Regulatory Affairs, U.S. and International.
- Maintenance of awareness of new developments in pharmaceuticals and pharmaceutical chemistry.
- Participation in drug development teams.
- Occasional overseas travel.

This opening offers a scientific administrative position with the opportunity to develop knowledge of the drug development and regulatory processes with a worldwide perspective.

Candidates must have a degree in Pharmacy and a Ph.D. together with at least three, and preferably five years, relevant laboratory experience in an ethical pharmaceutical company. Experience of report writing, a meticulous and efficient approach to work and good interpersonal skills are all essential. A knowledge of biotechnology products is desirable.

SK&F Laboratories is located near Valley Forge, PA in a new, state-of-the-art research complex. Our compensation and benefits are excellent and we offer the opportunity to work in a stimulating environment within a progressive organization.

For confidential consideration, interested qualified candidates send your c.v. stating salary requirements to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1592 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

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One position requires a BS/MS in Biochemistry or Biological Sciences. The successful candidate will have an interest in plant science plus a minimum of one year experience in molecular biology, including DNA sequencing and/or genomic/cDNA cloning.

A second position requires a BS/MS in Botany or a related science with a minimum of one year experience in plant cell and tissue culture of crop plants. Experience in cytological, anatomical or histological techniques preferred.

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Department of Botany

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Teaching responsibilities include morphology, systematics, and ecology.

The successful candidate is expected to interact and collaborate with the two colleagues engaged in plant physiology within the department.

Applications including a curriculum vitae, list of publications, reprints of not more than three papers, a brief statement of research activities in the past, present and future, and a documentation of teaching experience should be sent by *July 31, 1987*, to:

Professor Dr. H.-J. Güntherodt
Dekan der Philosophisch-Naturwissenschaftlichen
Fakultät
Klingelbergstrasse 23
CH-4056 Basel (Switzerland)

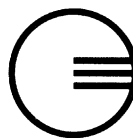
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The Gillette Research Institute, a division of The Gillette Company, has a career opportunity for an established researcher with ten or more years experience beyond Doctorate and demonstrated leadership and scientific accomplishments in skin-related programs.

Background and interest in biochemistry, physiology or related field required. Industrial experience and experience in hair research is desirable. Must have ability to transfer new scientific findings and methodologies to applied research environment.

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Rockville, Maryland 20850
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We have several positions available in the area of gene probes. We are seeking individuals with experience in hybridization assays and detection methods. Ideal candidates will have performed work in the development of non-radioactive detection systems with applications to nucleic acid probes or immunodiagnosics.

We offer excellent starting salaries and benefits. Qualified individuals are encouraged to reply with resume, in confidence, to position #425, Ciba Corning Diagnostics Corp., 63 North Street, Medfield, MA 02052.

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PROVOST

IOWA STATE UNIVERSITY

Iowa State University of Science and Technology invites nominations and applications for its newly-created position of provost. The provost is responsible for instruction and research, and reports directly to the president.

The provost will play a major role in the development and implementation of the University's strategic plan for instruction, research, and service.

Iowa State is a broad-based land grant university with 23,000 undergraduates and 4,000 graduate students organized into colleges of Agriculture, Business Administration, Design, Education, Engineering, Family and Consumer Sciences, Sciences and Humanities, and Veterinary Medicine. The University has special strengths in agriculture, engineering, and the physical and life sciences.

Nominees and applicants should have academic experience, including outstanding research and scholarship accomplishments, and demonstrated excellence in administration.

Iowa State subscribes to both the letter and spirit of affirmative action. Women and members of all other protected groups are urged to apply.

The position is available January 1, 1988. Applications will be accepted until August 31, 1987.

Direct nominations or applications to: David W. Lynch, Provost Search Committee
Department of Physics
Iowa State University
Ames, Iowa 50011

(515) 292-5442



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Participate in human and experimental animal studies involving a variety of neurochemical and neurophysiological techniques used to study indole and monoamine metabolism in the pineal gland, brain and other tissues. The duties will also include the utilization of isotopically labelled compounds to study their metabolism *in vivo*. Most importantly, all of the above methodology will be used in conjunction with complex and critical radioimmunoassay methods for the measurement of the pineal hormone, melatonin, and its metabolites and precursors in various tissues and body fluids. The applicant will be expected to be competent in the methods of clinical chemistry, and to be able to modify and optimize current methods for the physical isolation and concentration of analytes of interest in various tissue samples, and even to develop new methods independently. He or she will also be expected to be experienced in a variety of bioanalytic procedures including high performance liquid chromatography of biogenic amines, spectrophotofluorometric assay of indole derivatives, radioenzymatic assay of acetylcholine and related compounds, and in quality control methodology.

A bachelor's degree and postgraduate training in chemistry, biochemistry, pharmacology or related field and two to three years of laboratory and clinical experience in some of the areas described above are required. In addition, the applicant must have at least one year's experience in pineal research and be thoroughly familiar with the relevant literature. Of particular importance is a strong clinical background, a demonstrated competence in work with experimental animals, and a facility in the use of computers for data management and statistical analysis.

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The Merrell Dow Research Institute has a challenging career opportunity in our rapidly expanding Neurosciences group for a Neurobiologist with experience in computer imaging.

The successful candidate would join a multidisciplinary team of neuropharmacologists, molecular biologists, and biochemists; and be expected to contribute actively to both basic research and drug-discovery programs directed towards identification of new therapeutic approaches to nervous system disorders.

The individual should have a Ph.D. with 2-5 years post-doctoral experience in imaging as it relates to receptors, signal-transduction and second messengers. Experience with in situ hybridization techniques would be an advantage. Practical experience in using state-of-the-art computer imaging techniques and equipment is essential.

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STAFF and SENIOR STAFF FELLOWSHIP

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Rocky Mountain Laboratories
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National Institutes of Health
Hamilton, MT 59840**

Positions are available for doctoral-level individuals to participate in a research program on bacterial pathogens. Major topics of current work in the Laboratory of Microbial Structure and Function (LMSF) include gonococci, chlamydiae, and rickettsiae. Studies conducted in these areas range from animal models to molecular genetics. Current investigations by LMSF staff members include immunopathogenic mechanisms of chlamydial diseases, molecular cloning of protective antigenencoding rickettsial and chlamydial genes, epitope mapping of virulence and protection-associated bacterial surface antigens, and molecular bases for antigenic variation of gonococcal surface proteins. LMSF offers unique geographic and work environments in which modern approaches are applied to a number of pathogenic bacterial systems in excellent research laboratory and animal care facilities.

Qualifications: M.D., D.V.M., or Ph.D. in biomedical, behavioral or related science and, for IRTA and Staff Fellows, less than 3 years postdoctoral experience, or 3-7 years postdoctoral experience for Sr. Staff Fellows. Applicants with experience in biochemistry and molecular genetics are preferred, but others with similar experience will be considered.

Qualified and interested candidates should send curriculum vitae and names and addresses of three (3) references to:

**John Swanson, M.D., Chief
Laboratory of Microbial Structure & Function
NIAID, NIH
Rocky Mountain Laboratories
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(406) 363-3101**

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1988

Applications are invited for a training program in medical epidemiology. Successful candidates will be appointed as USPHS Service Fellows (a non-tenured, junior professional civil service classification). Applications must be received by September 8, 1987, to be considered for the period to begin approximately July 1, 1988.

For most successful applicants this will be a 3-year program. During the first year, these individuals will attend a university to study epidemiology, biostatistics, and related subjects. During the subsequent two years, they will work with senior epidemiologists in participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Food and Drug Administration; National Center for Health Statistics; and the National Institutes of Health) primarily in research studies. Applicants who have already had a year of study in epidemiology and biostatistics will in some cases be accepted only for the final two years of the program. A matching procedure will be employed to assure that each individual is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her career plans. Salaries will be provided according to the scale in effect for staff fellows in intramural research at ADAMHA and NIH. First year salaries are currently \$30,000 for physicians, \$24,000 for non-physicians. Educational costs and (allowable) relocation expenses for the first year are provided. The number of positions offered will depend upon the availability of resources.

Basic requirements for application to the program are:

1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, or equivalent, and one year of post-doctoral training or experience (by July 1, 1988).
2. U.S. citizenship at time of application.
3. Acceptability to an accredited university offering an M.P.H. or equivalent, or more advanced public health degree (for the first year of this program).

To obtain further program details and application forms, send a postcard only, with your printed name and home mailing address to:

**PHS Epidemiology Training Office
Attention: Ms. E. Patterson
9000 Rockville Pike
NIH, Building 1, Room 215
Bethesda, Maryland 20892**

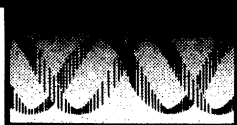
Please . . . *do not send* letters, curriculum vitae, resumes, transcripts, reprints, etc. until you have reviewed the instructions for submission and completed the application form.

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REPORTER, NEWS DEPARTMENT

The News & Comment section of *SCIENCE* Magazine located in Washington, D.C. has an opening for an experienced journalist with demonstrated knowledge of both science policy and research, who is independent, analytical, able to take the initiative, and has original story ideas. Five years of experience on a news magazine or newspaper, or commensurate experience as a freelance writer, is required. Please send curriculum vitae, a cover letter describing your interest in the News & Comment section of *SCIENCE* and giving salary history and requirement, and not more than five published articles to:

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Qualifications: BS/MS in Chemistry, Biochemistry, Pharmacology, Toxicology, Immunology, Molecular Biology or Cell Biology, with 2-4 years of related experience.

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POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE position available to study tumor-associated growth factors/paracrine modulation. Ph.D. in cell biology or biochemistry required with preference given for experience in tissue culture and/or membrane receptor characterization. Minimum duration: 2 years. Send résumé and three references: **Philip J. Walther, M.D., Ph.D., Departments of Surgery and Pathology, Box 3314, Duke University School of Medicine, Durham, NC 27710.**

POSTDOCTORAL RESEARCH ASSOCIATE. A position as a postdoctoral/research associate staff scientist is immediately available. Investigations will be on: (i) the differential gene expression of T lymphocyte subsets, (ii) the membrane immunochemistry related to cell-mediated cytotoxicity, or (iii) the molecular biology of human pigmentation disorders. Both practical experience in molecular biology and/or cellular immunology, and ability to organize a successful laboratory effort will be considered. There is competitive salary and benefits, and a rewarding lifestyle in rural N.E. Pennsylvania which is accessible to major research centers. Please send curriculum vitae and names of three references to: **Byoung Se Kwon, Ph.D., Molecular Genetics, Guthrie Research Institute, Guthrie Square, Sayre, PA 18840-1692.**

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Postdoctoral/research associate positions available immediately to participate in biochemical research dealing with (i) voltage-operated chloride channel purification and interaction with drugs and toxicants; (ii) use of receptors as biosensors for toxicants; or (iii) comparative pharmacology of GABA receptors. A Ph.D. in biochemistry, neuroscience, pharmacology, or toxicology is necessary. Send curriculum vitae and names to: **Dr. A. T. Eldefrawi, Department of Pharmacology and Experimental Therapeutics, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS AVAILABLE in areas of (i) membrane biochemistry: post-translational protein modification; regulation and sequence of processing events; intracellular targeting, and (ii) neurochemistry: Schwann cell regulation of myelination. [See *J. Cell Biol.* 104, 661-669 (1987).] HPLC experience necessary (oligosaccharide analysis; membrane protein isolation). Send curriculum vitae and names of three references to: **Dr. Joseph F. Poduslo, Membrane Biochemistry Laboratory, Departments of Neurology and Biochemistry/Molecular Biology, Mayo Clinic, Rochester, MN 55905. Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL RESEARCH ASSOCIATE—Available 1 July 1987 to study the relationship between the heat shock response and abnormal mammalian embryogenesis. Applicants should have strong background in recombinant DNA technology and preferably experience with monoclonal antibodies. Send curriculum vitae, statement of current research, and names of three references to: **Dr. Philip E. Mirkes, Department of Pediatrics, RD-20, University of Washington, Seattle, WA 98195.**

POSTDOCTORAL RESEARCH ASSOCIATE position available at Oregon State University to study genetic recombination and DNA repair in frog *Xenopus laevis* and other eukaryotic organisms and/or in *E. coli*. Interaction with colleagues in active laboratory and with large molecular biology community at OSU expected. Qualifications: Ph.D. in molecular biology or biochemistry area, research experience in protein or DNA biochemistry, molecular or bacterial genetics. Salary \$20,000 to \$22,000 per year depending on qualifications. Position available 1 November 1987. Send curriculum vitae and three letters of recommendation by 10 August 1987 to: (temporary address): **Professor John Hays, Department of Chemistry, University of Maryland Baltimore County, Catonsville, MD 21228. Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION, Department of Urology, University of Miami School of Medicine, and the Veterans Administration Medical Center, Miami, Florida, is currently available. The research focuses on multiparameter cell cycle analysis using flow cytometry for the classification of human tumor subpopulations and their response to treatment. The effects of multi-drug chemotherapy and radiation therapy using cell culture, and in vivo animal models will also be investigated. Experience with flow cytometry, monoclonal antibody staining/production, and cell culture preferred. A dual laser Epics V with Easy system, full range of laboratory equipment, and at least part-time technical assistance available. Salary negotiable. Please send curriculum vitae to: **Norman L. Block, M.D., Department of Urology, University of Miami School of Medicine, (D-1), P.O. Box 016217, Miami, FL 33101, or call 305-547-6518.**

POSTDOCTORAL RESEARCH POSITION: An opportunity is available to use new in vitro gene amplification technology [see *Science* 230, 1350-1354 (1985)] to study mammalian molecular genetics including recombination hot spots. Some experience in molecular biology preferred. Send curriculum vitae to: **Dr. Norman Arnheim, Department of Biological Science, University of Southern California, University Park, Los Angeles, CA 90089-0371. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL TRAINEE—Becton Dickinson Immunocytometry Systems is looking for a postdoctoral trainee to perform independent research. The incumbent will also supervise an associate, maintain records, present seminars, attend scientific meetings, and write manuscripts for scientific journals. Requires Ph.D. and/or M.D., with research experience and background in immunology, biochemistry, cell biology, or related bioscience. Must have excellent communication skills and enthusiasm, as well as the ability to conduct independent research. For immediate consideration, please send your résumé and salary history to: **Becton Dickinson Immunocytometry Systems, Attn: Dr. Vernon Maino, 2375 Garcia Avenue, Mountain View, CA 94043. An Equal Opportunity/Affirmative Action Employer.**

PROTEIN CHEMISTRY: Two postdoctoral/research associate positions available in the laboratory of **Professor Timasheff,** Brandeis University, to carry out research in protein chemistry. The areas of research are: (i) Mechanisms of protein- and protein assembly structural stabilization by solvent additives and of solvent modulation of biological activity; (ii) Mechanisms of interaction of anticancer drugs with tubulin and consequent inhibition of microtubule formation; linkages between drug binding and tubulin polymerization, and effects of structural modifications and structural simplifications of the drug molecules on interactions with tubulin; (iii) Pathways of tubulin self-assembly and ligand (nucleotides, ionic species) control of the end products formed (microtubules, rings, sheets); (iv) Solution mapping of the surface of the tubulin molecule by distance measurements between the various liganding sites (GTP, cations, drugs and drug moieties) using energy transfer fluorescence and resonance techniques, and changes in topography induced by the binding of various ligands. Send applications to: **Dr. Serge N. Timasheff, Graduate Department of Biochemistry, Brandeis University, Waltham, MA 02254. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR to participate in teaching dental and graduate students and to study the mechanisms of induction and regulation of IgA responses to microbial vaccines in mice, rats, and humans. Requires experience in cellular and humoral immunology, hybridoma technology, and general immunological techniques. Will be expected to initiate studies on host factors influencing collagen degradation and subsequent periodontal disease. Position available now to a D.D.S. (equivalent) with related research experience. Salary commensurate with rank and experience. Send curriculum vitae and three references by 6 July 1987 to: **Dr. S. M. Michalek, Department of Microbiology, University of Alabama at Birmingham, University Station, Birmingham, AL 35294. An Equal Opportunity Employer/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH FELLOW IN EXPERIMENTAL NEUROPSYCHOLOGY, Cornell University Medical College, Division of Cognitive Neuroscience. One to two years at \$21,000. Ph.D. or A.B.D. required. 1 September 1987 start date. Send curriculum vitae and names of three references to: **Michael S. Gazzaniga, Ph.D., Department of Neurology, Division of Cognitive Neuroscience, Cornell University Medical College, 1300 York Avenue, S-919, New York, NY 10021.**

RADIOLOGICAL SCIENCES RESEARCH DIRECTOR

Applications are invited for a tenure-track full-time faculty position as Radiological Sciences Research Director in the Department of Radiology at the University of Nebraska Medical Center. Candidates must be a Ph.D. and/or M.D. with postdoctoral research experience including thorough knowledge of biostatistical analysis, and knowledge in physiology and anatomy. The Director will be expected to prepare grants and obtain external funding from local, state, and federal agencies, to coordinate developmental research projects, and to be responsible for basic science and clinical experimental design. The Director will be encouraged to pursue independent research projects in areas complementing those of the current faculty. Applications should be received no later than 1 October 1987 by: **Thomas J. Imray, M.D., Professor and Chairman, Department of Radiology, University of Nebraska Medical Center, Omaha, NE 68105. Telephone: 402-559-6396 for further details. An Equal Opportunity/Affirmative Action Employer M/F/H/V.**

RADIATION SAFETY OFFICER, INSTRUCTOR

ASSOCIATE SAFETY OFFICER. Clarkson University seeks a person to serve as an associate radiation and hazardous substance officer for the university and part-time instructor in industrial hygiene. Master's or Ph.D. in biology, toxicology, health physics, or industrial hygiene preferred with eligibility for certification as a RSO by the state and appropriate professional board very important. Please address applications and three letters of recommendation to: **Dr. A. E. Linkins, Chairman, Department of Biology, Clarkson University, Potsdam, NY 13676 by 27 June 1987. An Equal Opportunity/Affirmative Action Employer.**

RENAL CLINICAL RESEARCH/CLINICAL LABORATORY TECHNICIAN

Newly established renal laboratory in University-affiliated hospital in Brooklyn Heights seeks technician with experience in clinical research and statistical methods at the Master's or Ph.D. level. Some clinical laboratory experience (including microscopy, autoanalyzer, RIA, etc.) preferred. Good opportunity for motivated individual. Please contact: **Dr. Philip Goldwasser at 718-780-1247. Strictest confidence is assured.**

RESEARCH ASSOCIATE POSITION: MICROMETEOROLOGY AND TURBULENCE TRANSFER—Available immediately to conduct micrometeorological/turbulent transfer studies of water vapor, heat, carbon dioxide, and other gases over vegetated surfaces. M.S. level training in atmospheric turbulence, micrometeorology, or related areas needed. Familiarity and experience with turbulence (eddy correlation) instrumentation and computer software required. Send curriculum vitae, transcripts, and names of references by 15 July 1987 to: **Dr. S. B. Verma, Center for Agricultural Meteorology and Climatology, University of Nebraska-Lincoln, Lincoln, NE 68583-0728. Telephone: 402-472-3679. University of Nebraska-Lincoln does not discriminate in employment practices.**

RESEARCH PROGRAM DIRECTOR

Project Director (research scientist engineer) will have administrative responsibilities for a major geologic research program. Requires 10 years of management experience; M.S. or Ph.D. (preferred) in geology or related engineering. Duties will include project management, contract negotiation, and presentation of research results to government officials, scientists and engineers, and the general public.

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer. Send résumé and names of three references to: **E. G. Wermund, Bureau of Economic Geology, The University of Texas at Austin, University Station-Box X, Austin, TX 78713-7508.**

The Agricultural Research Division of American Cyanamid Company has 2 immediate opportunities for Project Leaders in the Biochemistry and Physiology Group of the Department of Animal Industry Discovery and Biotechnology. An ability to enthusiastically meet a challenge is an essential feature of these posts.

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This individual will lead a team of scientists and will be responsible for planning, establishing, and executing a research program aimed at identifying and establishing immunological methods of modifying hormone activity towards enhanced animal production.

Applications are sought from highly-motivated, goal-oriented candidates with a PhD in Endocrinology/Immunology and experience in coordinating the research of one or more individuals. A knowledge of monoclonal antibody production and peptide immunology would be an advantage.

PROJECT LEADER

This individual will lead a group of 5 scientists currently assessing compounds as potential growth promotants and/or repartitioning agents. The post will involve a minimum of administration; the primary objective being to develop and establish new and innovative screens. Close collaboration with scientists, both inside and outside the Company, is expected.

The successful candidate will be highly motivated, have a PhD in Biochemistry or Physiology, and experience in supervising the research of one or more scientists. A knowledge of muscle and fat biochemistry/physiology would be an advantage as would experience in receptor technology.

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Molecular Biology- Neurobiology Research

The Molecular Biology Research Group of the Upjohn Company is currently building a group to work on molecular approaches to neurobiology.

Postdoctoral Scientist

The successful candidate will have a Ph.D. in biochemistry, molecular biology or related discipline. Significant research accomplishment with evidence by publications is important. This position will involve a two-year appointment. A strong research background in cDNA/gene cloning and DNA sequencing is necessary. An interest in working in the area of diseases of the central nervous system is important, and CNS research experience and background will be a strong plus. Familiarity with *in vivo* expression systems such as *Xenopus* oocytes and transgenic models is preferred, but not required. In addition to continued work using the candidate's expertise in molecular biology, the work will also include collaborative projects with other biotechnology units and the CNS Research group at Upjohn. Please refer to position number 21051-F.

Molecular Biology Associate

The successful Research Associate candidate will have a BS or MS degree plus at least one year of research experience in recombinant DNA techniques. This is a career position. A strong research background in cDNA/gene cloning and DNA sequencing is necessary. An interest in working in the area of diseases of the central nervous system is important, and CNS research experience and background will be a strong plus. Familiarity with *in vivo* expression systems, such as *Xenopus* oocytes and transgenic models is preferred, but not required. In addition to continued work using the candidate's expertise in molecular biology, the work will also include collaborative projects with other biotechnology units and the CNS Research group at Upjohn. Please refer to position number 21050-A.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary commensurate with experience, a comprehensive benefits program and relocation assistance. For confidential consideration, please call toll free 1-800-253-8600, ext. 3-6767, (inside Michigan call collect 616-323-6767) to request an employment application be sent to you. Please refer to the appropriate ad number above when calling.

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POSITIONS OPEN

RESEARCH ASSOCIATE OR RESEARCH ASSISTANT. Forest Growth and Yield Modeling. To develop growth models for young Douglas-fir plantations in association with shrub and hardwood species. Ph.D. (or M.S. and minimum of three years of experience) in forest growth and yield computer modeling. Full-time, 12-month faculty position. Salary \$20,000 to \$25,000, depending on qualifications. Position under direction of **Dr. Steven R. Radosevich** (503-754-2244). Send letter of application, complete résumé and transcripts, and three letters of reference by 19 June 1987 to: **Dr. Logan A. Norris, Head, Department of Forest Science, College of Forestry, Oregon State University, Corvallis, OR 97331.** *An Equal Employment Opportunity/Affirmative Action Employer. Complies Rehabilitation Act Section 504.*

SENIOR VIROLOGIST

We have a newly created opportunity to direct and participate in the development of a basic and applied research program dealing with immunologic and virologic aspects of retrovirus infections leading to the development of research contracts, products, and services. Areas of investigation may include the molecular biology of human and simian retroviruses, the expression of retroviral genes in mammalian cells and the possible development of novel therapeutic agents or diagnostic tests. Requirements include a doctoral degree and several years of laboratory experience in related fields. Practical laboratory experience with simian or human retroviruses, especially HIV, is highly desirable. Excellent administrative and managerial skills will be essential to successfully direct the growth of this program.

Microbiological Associates Inc., an established leader in health effects research, is located in a newly constructed bioresearch facility in the Life Sciences Center in suburban Washington, D.C., 15 minutes from the NIH campus. Life sciences-focused campuses of two major universities will be located within the Life Sciences Center.

For immediate consideration, please call or send your curriculum vitae to:

Constance J. Kepner
Director of Personnel
Microbiological Associates Inc.
Life Sciences Center
9900 Blackwell Road
Rockville, MD 20850
Telephone: 301-738-1000

Equal Opportunity Employer/M/F/H/V

TISSUE CULTURE TECHNICIAN FORESTRY RESEARCH

The Forest Genetics Group of Westvaco Corporation has an opening for a senior research technician in the area of plant cell and tissue culture. This position will be located at our Forest Research Headquarters in Summerville, South Carolina. The primary responsibilities of this position will be coordinating the laboratory activities involved in the development of various cell and tissue culture systems in woody species.

Westvaco is a world leader in the manufacture of fine papers and paper products. Our Forest Research laboratories are concerned with providing for and improving upon the raw material used for paper production. One of our major research areas involves conventional genetic improvement of commercial tree species. Our expanding cell and tissue culture program interfaces with this genetic improvement research.

Applicants should have an M.S. degree with at least 2 years of experience in a plant tissue culture laboratory or a B.S. degree with at least 4 years of experience working in a tissue and cell culture lab, preferably as a head technician. Experience with various cell and tissue culture systems including protoplast, callus and suspension cultures as well as with traditional micropropagation systems is desired. Experience with woody plants is not required.

For consideration, please send your résumé, college transcripts, and three letters of recommendation before 31 July 1987 to: **Mr. Ted Bush, Personnel Department, Westvaco Corporation, P.O. Box 1950, Summerville, SC 29484.** *Equal Opportunity Employer M/F.*

POSITIONS OPEN

RESEARCH COORDINATOR POSITION to utilize molecular genetic techniques in ongoing study of variability in natural populations. Experience with DNA methods such as restriction site mapping, Southern blotting, and cloning is required. Starting yearly salary is \$20,000, available for 4 years, beginning on or shortly after 1 July 1987. Send résumé and names of three references to: **Dr. John C. Avise, Department of Genetics, University of Georgia, Athens, GA 30602.** Telephone 404-542-1456.

AWARDS

YOUNG INVESTIGATOR AWARD

The University of California, Los Angeles (UCLA) Clinical Nutrition Research Unit invites inquiries regarding a Young Investigator Award for research into relationships between cancer and nutrition. The award provides partial salary support at the junior faculty level at UCLA for 2 years beginning 1 October 1987. For further information contact: **Joel D. Kopple, M.D., Director, UCLA CNRU, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, CA 90509.**

TRAINEESHIP

PREDOCTORAL TRAINEESHIPS leading to the Ph.D. degree in neuroscience are available in the Neuro-pathology Laboratory at The Johns Hopkins University School of Medicine for qualified students interested in basic neurobiological approaches to diseases of the nervous system. Research in the laboratory focuses on the neuropathological substrates of Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, and other disorders of the nervous system, as well as animal models of these conditions. Approaches include: immunocytochemistry, electron microscopy, receptor autoradiography, computer imaging for quantitating morphometric studies, protein chemistry, and techniques derived from molecular biology. These strategies are used to analyze postmortem human tissues and animal models of neurological disorders. In addition, we focus on electrophysiological recordings, neuroanatomical tracing methods, and immunocytochemistry/in situ hybridization to define functions, connectivities, and specificities of a variety of neurotransmitter systems implicated in human disease. These positions are limited to U.S. citizens or permanent residents. For further information, contact: **Donald L. Price, M.D., Neuropathology Laboratory, 509 Pathology Building, The Johns Hopkins University School of Medicine, 600 North Wolfe Street, Baltimore, MD 21205-2182.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS in molecular biology and applied computer science are available at the Dana Farber Cancer Institute. Candidates must have a recent Ph.D. in molecular biology, biochemistry, genetics, or computer science. The research will center on the problems of genetics sequence pattern and protein functional domain identification. This will involve collaboration with active experimental molecular biologists and computer software developers. One position is available immediately and two are anticipated by 1 September 1987. Successful applicant will hold a joint appointment with the Bio-Statistics Department at the Harvard School of Public Health. Send curriculum vitae and three letters of reference to: **Dr. Temple F. Smith, Director, Molecular Biology Computer Research Resource, J815, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP—Cornell University Medical College and Graduate School of Medical Sciences. Recent Ph.D. with interest in molecular cloning of hepatic proteins and/or cell surface receptor characterization, and cloning related to heme and porphyrin metabolism. Minimum 2-year commitment; previous cloning experience not required. Send curriculum vitae and three letters of reference to: **Dr. Ursula Muller-Eberhard, Pediatric Hematology/Oncology, N-804, Cornell University Medical College, New York, NY 10021.**

FELLOWSHIPS

RESEARCH/INSTRUCTOR FELLOWSHIP IN EVOLUTIONARY BIOLOGY

The Biology Department at Rice University seeks to fill the Huxley Research Instructorship in Biology. This is a one-year appointment, renewable for a second year, for teaching and research in evolutionary biology. The candidate will be expected to have recently completed a Ph.D. Possible areas of interest will include evolution of sociality in insects, plant ecology, biochemical evolution, microbial genetics, physiological adaptation, population dynamics, or other topics which complement present faculty interests. Duties will include an opportunity to do some teaching related to one's specialty and collaborative research with faculty in the department. Applications, including curriculum vitae, a summary of research and teaching interests, and at least three letters of reference, are to be sent to: **Dr. Raymon Glantz, Department of Biology, Rice University, Houston, TX 77251; telephone: 713-527-4915.** Application deadline is 1 July 1987. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

KING'S COLLEGE, CAMBRIDGE, ENGLAND ECOLOGICAL AND SOCIAL INFLUENCES ON HUMAN REPRODUCTION RESEARCH FELLOWSHIPS

The Governing Body of King's College, Cambridge, England, invite applications for research fellowships. Successful candidates will join an interdisciplinary project in the College's Research Centre on the ecological and social influences on human reproduction. The College would welcome candidates in the social and biological sciences with interests in human reproduction, demography, and family structure.

Men and women candidates of any university are eligible. The elections will be in December 1987 and the fellowships will commence on 1 October 1988. The normal tenure is 4 years, ending on 30 September 1992. Stipends range from about £8,000 to about £15,000 a year, depending on age and experience, and an unmarried fellow is provided with accommodation in College if he or she wishes. Applications for non-stipendiary fellowships will also be considered.

Applications will need to be made by 1 October 1987. Further details and information on how to apply may be obtained from: **The Convener, The Research Centre, King's College, Cambridge CB2 1ST, England.**

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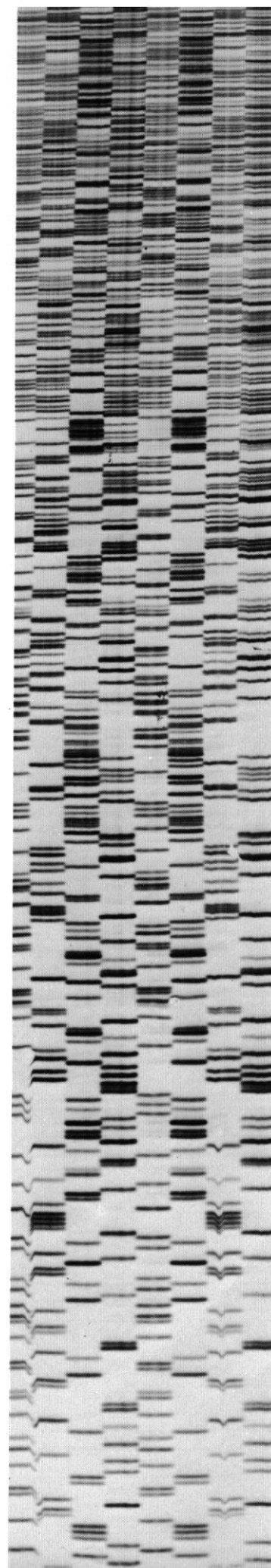
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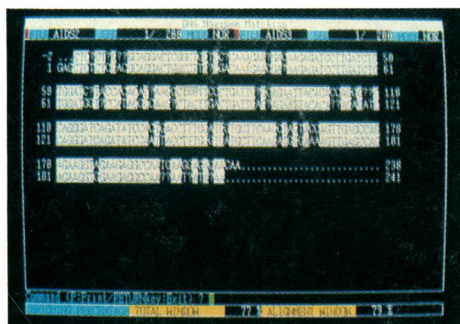
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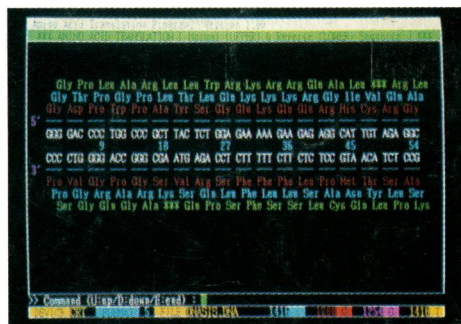
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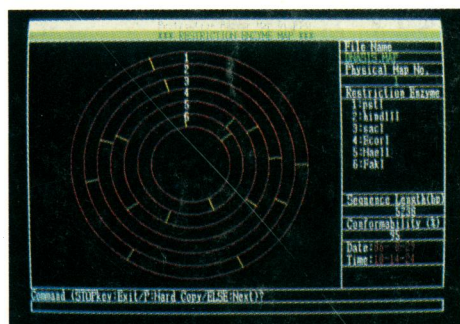
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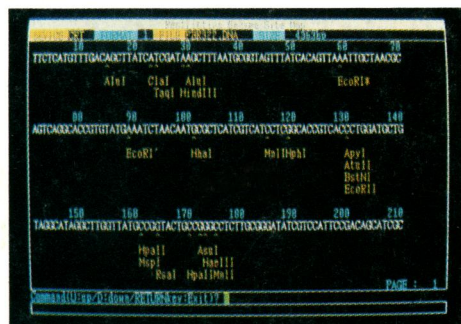
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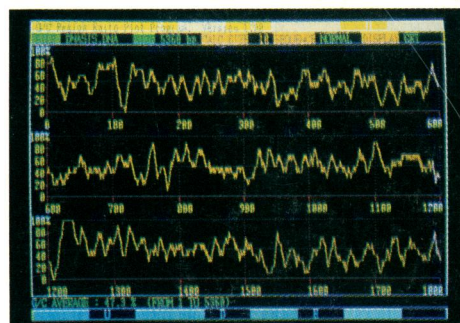
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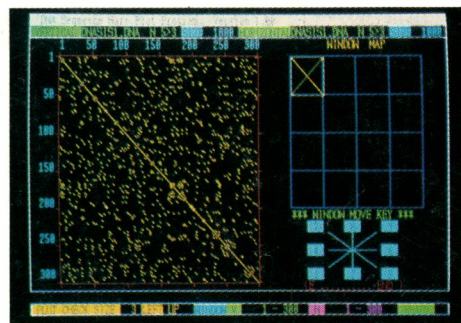
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