

technological ideas behind radio, or L. S. Howeth's study of radio in the Navy. But it does provide a more widely ranging, more interpretative alternative.

GEORGE WISE  
General Electric Research and  
Development Center,  
Schenectady, NY 12301

## Reprints of Books Previously Reviewed

**Charles Darwin's Natural Selection.** Being the Second Part of His Big Species Book Written from 1856 to 1858. R. C. Stauffer, Ed. Cambridge University Press, New York, 1987. Paper, \$29.95. *Reviewed* 188, 824 (1975).

**The Statistics of Natural Selection on Animal Populations.** Bryan F. J. Manly. Chapman and Hall (Methuen), New York, 1988. Paper, \$37.50. *Reviewed* 232, 271 (1986).

## Books Received

**ADP-Ribosylation of Proteins.** Enzymology and Biological Significance. F. R. Althaus and Ch. Richter. Springer-Verlag, New York, 1987. xvi, 237 pp., illus. \$120. Molecular Biology, Biochemistry, and Biophysics, vol. 37.

**Agricultural Marketing Enterprises for the Developing World.** With Case Studies of Indigenous Private, Transnational Co-operative and Parastatal Enterprise. John C. Abbott. Cambridge University Press, New York, 1987. xiv, 217 pp., illus. \$44.50.

**Agroforestry.** Realities, Possibilities and Potentials. Henry L. Gholz, Ed. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 227 pp., illus. \$68.

**The Amoeba Distributed Operating System.** Selected Papers 1984-1987. Sape J. Mullender, Eds. Centrum voor Wiskunde en Informatica, Amsterdam, 1987. vi, 309 pp., illus. Paper, Dfl. 46.70. CWI Tract 41.

**Anatomy of the Dromedary.** Malie M. S. Smuts and A. J. Bezuidenhout. Clarendon (Oxford University Press), New York, 1987. xiv, 230 pp., illus. \$175.

**Applied Mathematics.** A Contemporary Approach. J. David Logan. Wiley-Interscience, New York, 1987. xviii, 572 pp., illus. \$44.95.

**The Bog Man and the Archaeology of People.** Don Brothwell. Harvard University Press, Cambridge, MA, 1987. 128 pp., illus., + plates. \$20; paper, \$9.95.

**Cancer Cytogenetics.** Sverre Heim and Felix Mitelman. Liss, New York, 1987. viii, 309 pp., illus. \$35.

**Cartographical Innovations.** An International Handbook of Mapping Terms to 1900. Helen M. Wallis and Arthur H. Robinson, Eds. Map Collector Publications, Tring, U.K., 1987. xxii, 353 pp., illus. 42.

**Chaos, Noise and Fractals.** E. R. Pike and L. A. Lugiatto, Eds. Hilger, Bristol, U.K., 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 249 pp., illus. \$43. Malvern Physics Series. Based on a seminar, Como, Italy, Sept. 1986.

**Digital Visions.** Computers and Art. Cynthia Goodman. Abrams, New York, and Everson Museum of Art, Syracuse, 1987. 192 pp., illus. \$29.95; paper, \$19.95.

**Directional Hearing.** William A. Yost and George Gourevitch, Eds. Springer-Verlag, New York, 1987. x, 305 pp., illus. \$60.

**Environmental Monitoring, Assessment, and Management.** The Agenda for Long-Term Research and Development. Sidney Draggan, John J. Cohnsen, and Richard E. Morrison, Eds. Praeger (Greenwood), Westport, CT, 1987. xxvi, 129 pp., illus. \$39.95. Based on a meeting, Washington, DC, May 1984.

**Environmental Sciences.** Frances S. Sterrett, Ed. New York Academy of Sciences, New York, 1987. x, 245 pp., illus. \$61. Annals of the New York Academy of Sciences, vol. 502. From meetings, New York, 1984-85.

**The Eskimos and Aleuts.** Don E. Dumond. 2nd ed. Thames and Hudson, New York, 1987. 180 pp., illus. Paper, \$11.95. Ancient Peoples and Places.

**Exploring the Southern Sky.** A Pictorial Atlas from the European Southern Observatory (ESO). Svend Laustsen, Claus Madsen, and Richard M. West. Springer-Verlag, New York, 1987. vi, 274 pp. \$39.

**Fundamentals of Biotechnology.** Paul Präve et al., Eds. VCH, New York, 1987. xvi, 792 pp., illus. \$170.

**Gauge Fields and Strings.** A. M. Polyakov. Harwood, New York, 1987. x, 301 pp. \$48; paper, \$18. Contemporary Concepts in Physics, vol. 3.

**Geochemical and Hydrologic Processes and Their Protection.** The Agenda for Long-Term Research and Development. Sidney Draggan, John J. Cohnsen, and Richard E. Morrison, Eds. Praeger (Greenwood), Westport, CT, 1987. xxvi, 211 pp., illus. \$39.95. Based on a panel, Washington, DC, May 1984.

**Heat Mining.** A New Source of Energy. H. Christopher H. Armstead and Jefferson W. Tester. Spon, London, 1987 (U.S. distributor, Methuen, New York). xviii, 478 pp., illus. \$89.95. A survey of the technology and economics of geothermal energy.

**Heat Transfer of Finned Tube Bundles in Cross-flow.** J. Stasiulevičius and A. Skirnska. A. Zukauskas, Ed. English-language editor, G. F. Hewitt. Hemisphere (Harper and Row), New York, 1987. xiv, 224 pp., illus. \$84.50. Experimental and Applied Heat Transfer Guide Books. Translated from the Russian edition.

**Inverse and Ill-Posed Problems.** Heinz W. Engl and C. W. Groetsch, Eds. Academic Press, Orlando, FL, 1987. xvi, 567 pp., illus. \$59. Notes and Reports in Mathematics in Science and Engineering, vol. 4. From a seminar, St. Wolfgang, Austria, June 1986.

**Kelvin's Baltimore Lectures and Modern Theoretical Physics.** Robert Kargon and Peter Achinstein, Eds. MIT Press, Cambridge, MA, 1987. xii, 547 pp., illus. \$40. Studies from the Johns Hopkins Center for the History and Philosophy of Science.

**The Last Intellectuals.** American Culture in the Age of Academe. Russell Jacoby. Basic Books, New York, 1987. xiv, 290 pp. \$18.95.

**Let's Call Him Barnum.** Frances R. Brown. Vantage, New York, 1987. x, 81 pp. \$8.95.

**Life Style and Criminality.** Basic Research and its Application: Criminological Diagnosis and Prognosis. H. Göppinger. Springer-Verlag, New York, 1987. \$89.50. Translated from the German.

**The Measurement of Appearance.** Richard S. Hunter and Richard W. Harold. 2nd ed. Wiley-Interscience, New York, 1987. xviii, 411 pp., illus. \$65.

**Middle Atmosphere Dynamics.** David G. Andrews, James R. Holton, and Conway B. Leovy. Academic Press, Orlando, FL, 1987. xii, 489 pp., illus. Paper, \$34.95. International Geophysics Series, vol. 40.

**Natural Toxins.** Animal, Plant, and Microbial. John B. Harris, Ed. Clarendon (Oxford University Press), New York, 1986. xvi, 353 pp., illus. \$72.50. Based on a congress, Newcastle upon Tyne, U.K., Aug. 1985.

**Nature.** The Other Earthlings. James Shreeve. Macmillan, New York, 1987. 288 pp., illus. \$29.95.

**Response Surfaces.** Designs and Analyses. Andre I. Khuri and John A. Cornell. Dekker, New York, and American Society for Quality Control, Milwaukee, 1987. xiv, 405 pp., illus. \$45. Statistics, vol. 81.

**Reversible Polymeric Gels and Related Systems.** Paul S. Russo, Ed. American Chemical Society, Washington, DC, 1987. x, 292 pp., illus. \$64.95. ACS Symposium Series, vol. 350. Based on a symposium, New York, April 1986.

**Science of Engineering Materials.** C. M. Srivastava and C. Srinivasan. Wiley, New York, 1987. xii, 462 pp., illus. \$39.95.

**The Scientific Attitude.** Frederick Grinnell. Westview, Boulder, CO, 1987. xviii, 141 pp., illus. \$29.50; paper, \$13.50.

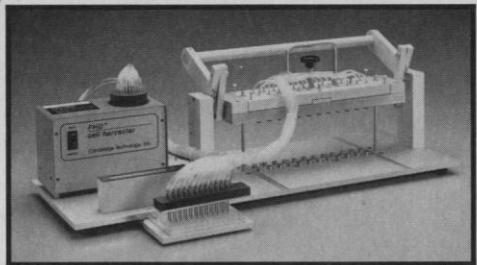
**Scientific Realism.** A Critical Reappraisal. Nicholas Rescher. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xiv, 169 pp., illus. \$59. University of Western Ontario Series in Philosophy of Science, vol. 40.

**Theory and Design of Adaptive Filters.** John R. Treichler, C. Richard Johnson, Jr., and Michael G. Larimore. Wiley-Interscience, New York, 1987. Topics in Digital Signal Processing.

**Thinking Like a Physicist.** Physics Problems for Undergraduates. N. Thompson. Hilger, Bristol, U.K., 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 145 pp., illus. Paper, \$14.

**Voice of the Universe.** Building the Jodrell Bank Telescope. Bernard Lovell. 2nd ed. Praeger (Greenwood), New York, 1987. xxxii, 300 pp., illus., + plates. \$37.95; paper, \$14.95. Convergence Series.

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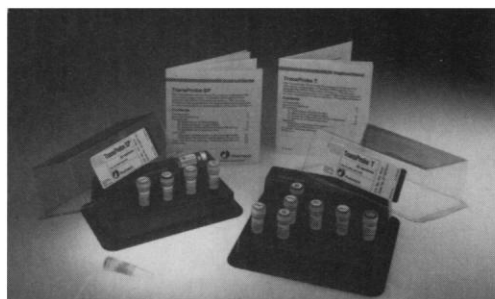
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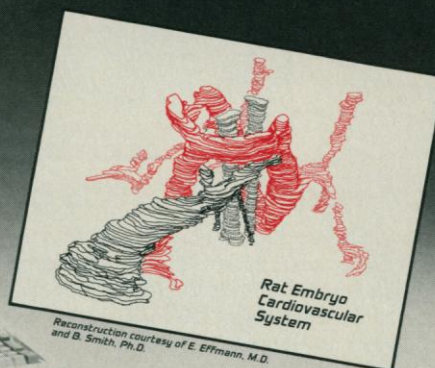
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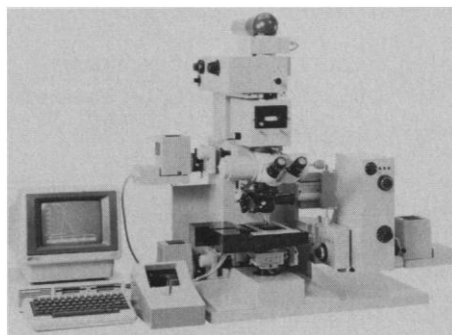
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### *Literature*

The *Leeman Letter* is a newsletter for users of inductively coupled plasma spectrometers. Leeman Labs. Circle 554.

SCAN TIME #11 is a newsletter that covers applications and developments in infrared and Fourier-transform infrared spectroscopy. Spectra-Tech. Circle 658.

*The Filter Book* is a catalog of 100 products for cell culture, air analysis, microbiology, biotechnology, general filtration, thin-layer chromatography, and high-performance liquid chromatography. Gelman Sciences. Circle 659.

The 1988 *Air Sampling Catalog* features sorbent tubes and accessories, color-detector tubes, sample bags, calibrators, filters, impingers, gas-monitoring badges, and constant-flow pumps. SKC. Circle 661.

*Reflectance Materials & Standards* includes certified reflectance standards, calibrated reflectance targets, wavelength reflectance standards, reflectance component-fabrication services, and reflectance-measurement services. Labsphere. Circle 662.

*NMR Analysis* is a brochure that describes nuclear magnetic resonance services. Spectral Data Services. Circle 663.

*The Electron Microscopy Newsletter* features products for electron and light microscopy. Ted Pella. Circle 664.

*High Performance LC Bioseparation Systems* is a brochure about modular bioseparation systems for liquid chromatography with isocratic, gradient, and automated configurations. Pharmacia LKB Biotechnology. Circle 665.

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ASSISTANT OR  
ASSOCIATE PROFESSOR**

Applications are being accepted from persons with graduate training, postdoctoral experience, and proven accomplishment in nutrition or the following sciences related to nutrition: chemistry, biochemistry, and pharmacology. Applicants must demonstrate the ability to develop an independent research program and teach a chemical approach to the biological effects of foods and their constituents. Preference will be given to candidates whose research has a chemical or molecular orientation. It is hoped to make an appointment as early as September, 1988.

*Expression of interest is particularly invited from qualified women and minority candidates.*

Send curriculum vitae, a summary of past accomplishments, a statement of future interests in research and teaching, and the names and addresses of three references to:

**Professor Peter Goldman  
Harvard School of Public Health  
665 Huntington Avenue  
Boston, MA 02115**

## POSITIONS OPEN

### ASSISTANT PROFESSOR PLANT SYSTEMATICS— CORNELL UNIVERSITY

The L. H. Bailey Hortorium, a unit of the Division of Biological Sciences and the New York State College of Agriculture and Life Sciences, Cornell University, seeks applicants for a tenure-track position in plant systematics, starting date negotiable. Seventy-five percent of time will be devoted to research and twenty-five percent to teaching. The research effort includes developing and maintaining a vigorous, independent research program in plant systematics and assuming a leading role in the Hortorium's special research program on the *Cultivated Flora of the United States*. Teaching duties will emphasize the taxonomy of cultivated plants, as well as assistance in teaching the introductory plant taxonomy course and participation in the Hortorium's graduate student program. The appointee must have a Ph.D., and interest in the taxonomy of cultivated and/or economically important plants. An interest in tropical plant groups is desirable. Applicants should send their curriculum vitae, teaching experience, and a detailed statement of future research interests, and arrange to have four letters of recommendation sent to: **Dr. Jeffrey J. Doyle, Search Committee Chair, L. H. Bailey Hortorium, 467 Mann Library Building, Cornell University, Ithaca, NY 14853.** To be assured of receiving consideration, applications should be received by 2 May 1988. *Cornell University is an Equal Opportunity/Affirmative Action Educator and Employer.*

**ASSISTANT PROFESSOR OF MEDICINE**, Section on Endocrinology and Metabolism, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC. Full-time faculty position for postdoctoral basic scientist. Salary \$30,000 to \$34,000.

Significant research experience and record of scientific publication required in two areas: sex hormone physiology and plasma lipoprotein metabolism.

Send curricula vitae by 1 April 1988 to: **Dr. Norman E. Miller, Head, Section on Endocrinology and Metabolism, Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

Department of Zoology anticipates two tenure-track **ASSISTANT PROFESSORSHIPS** for fall, 1988. (1) **GENETICS/EVOLUTIONARY BIOLOGY.** Seeking geneticist to explore population genetics and evolution in animal systems using modern analytical techniques. Must be able to effectively teach broad range of evolutionary/genetic topics. (2) **ESTUARINE ECOLOGY.** Must have interest in estuarine systems. Preference may go to candidates working empirically with zooplankton/larval ecology and interested in interactions among populations. Minimum qualifications: Ph.D. in appropriate discipline. Salary commensurate with qualifications and experience. Candidates should exhibit commitment to teaching at undergraduate and graduate levels, and evidence of strong research potential. Send curriculum vitae statement of research goals, and three letters of reference by 11 April 1988 to: **Peter F. Sale, Chair, Department of Zoology, University of New Hampshire, Durham, NH 03824.** Non-citizens must include current visa status. *UNH is an Affirmative Action/Equal Employment Opportunity Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR**—Tenure-track, Department of Radiation Medicine—Georgetown University. Ph.D. with postdoctoral experience in molecular biology (oncogenes and anti-oncogenes)—to join research group in radiation biology.

Send curriculum vitae to:

**Anatoly Dritschilo, M.D., Chairman  
Department of Radiation Medicine  
Georgetown University Medical Center  
3800 Reservoir Road, N.W.  
Washington, D.C. 20007**

**ASSOCIATE RESEARCH SCIENTIST:** position available immediately. Ph.D. with training in mycoplasma/molecular biology to join ongoing research team studying human pathogenic mycoplasmas and mycoplasma host interactions. Experience with current electron microscopy techniques helpful. Salary range: \$25,000 to \$30,000, based on experience. Send curriculum vitae and three letters of reference to: **Millicent Coker-Vann, Ph.D., 2455 Army Navy Drive, Arlington, VA 22206.**

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSORS**—Two tenure-track faculty positions in clinical laboratory sciences: (1) microbiologist or clinical laboratory scientist with microbiology experience, certification in microbiology preferred; and (2) clinical laboratory scientist with experience in molecular biology. Individuals will be expected to conduct a strong research program, supervise graduate students, and teach in the B.S. and M.S. programs. Ph.D. required and experience in health sciences education preferred. Rank and salary commensurate with experience. Submit curriculum vitae and three letters of recommendation by 15 April 1988 to: **Chair, Department of Health Sciences, School of Allied Health Professions, University of Wisconsin (UWM), P.O. Box 413, Milwaukee, WI 53201.** *UWM is an Affirmative Action/Equal Opportunity Employer.*

### ASSOCIATE VICE PRESIDENT FACULTY AFFAIRS AND RESEARCH CALIFORNIA STATE UNIVERSITY, HAYWARD

**Responsibilities:** (i) fostering campus research and faculty development and administering sabbatical leaves and faculty exchanges, (ii) providing information and aid in grant and contract procurement, writing, and submission, (iii) coordinating campus research committees, and (iv) administering faculty personnel policies, student grievances and other assignments. The Associate Vice President will be aided by a half-time Assistant Vice President. **Qualifications:** Doctorate and significant teaching, administrative and research experience at the university level and related to the requirements of the position. A record of successful professional activity and research and a knowledge of funding mechanisms are expected. Salary and fringe benefits are competitive. Expected appointment date is 15 June 1988. Applications and/or nominations will begin to be considered 1 April 1988; those received after 1 May 1988 cannot be assured consideration. Please direct all correspondence to: **Chair, Selection Committee for the Associate Vice President, Research and Faculty Affairs, c/o Office of the Provost, California State University, Hayward, Hayward, CA 94542-3007.** *An Equal Opportunity/Affirmative Action Employer. Women and ethnic minority faculty are especially encouraged to apply.*

### STANFORD UNIVERSITY

The Department of Biological Sciences is searching for a **BEHAVIORAL ECOLOGIST** at the level of assistant professor. We seek an ecologist whose interests focus on behavior. The successful candidate must have an outstanding record of research. Teaching responsibilities will include an undergraduate course in behavioral ecology. *Stanford University is an Equal Opportunity Employer. Women and minority candidates are especially invited to apply.* Send curriculum vitae and the names of three references to: **Behavioral Ecology Search Committee, Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020.**

**BIOCHEMIST/MOLECULAR BIOLOGIST.** A tenure-track faculty position is available in the Department of Biological Chemistry, Dental Branch, The University of Texas Health Science Center at Houston. Applicants should have a Ph.D., postdoctoral experience, and an active research program, preferably utilizing biochemical or molecular biological techniques to study problems concerning mineralized or oral tissues. The applicant will be expected to develop an extramurally funded research program. Responsibilities include teaching dental and graduate students. Salary and rank will be commensurate with qualifications. Send curriculum vitae and names of three references to: **Dr. William T. Butler, Chairman, Department of Biological Chemistry, Dental Branch, The University of Texas Health Science Center, P.O. Box 20068, Houston, TX 77225.** *The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

**BIOCHEMIST, Ph.D.**—CIBA Corning Diagnostics, in Irvine, California is seeking a Ph.D. with experience in the stabilization of enzymes and proteins. Hemoglobin experience helpful. Postdoctorate and/or industry experience acceptable. Relocation assistance provided. Qualified applicants should send resumé with salary requirements to: **Karen Kelley, Human Resources Manager, 17395 Daimler Street, Irvine, CA 92714.** *We are an Equal Opportunity Employer M/F/H/V Employer.*

## POSITIONS OPEN

### BIOCHEMISTS

Tenure-track faculty positions are available for candidates interested in developing strong and independent research programs with long-term growth potential. All areas will be considered, but emphasis will be in: large DNA viruses; extracellular matrix molecular biology; dental biochemistry; molecular endocrinology. The Department of Biochemistry has excellent facilities and is undergoing substantial expansion. Teaching includes medical, dental, and graduate students within a sizable medical complex. Salary is commensurate with experience. Curriculum vitae, brief statement of present and future research interests, and three letters of recommendation should be sent to: **Dr. R. D. Wells, Department of Biochemistry, The University of Alabama at Birmingham, Birmingham, AL 35294.** *An Equal Opportunity/Affirmative Action Employer.*

**BIOLOGY:** Two biology **FACULTY POSITIONS.** Applications are invited for two assistant professor positions beginning August, 1988 (Ph.D. required). (i) Microbiologist with expertise to teach related courses including botany. (ii) Physiologist with expertise to teach comparative anatomy and related courses. Ability and willingness to teach introductory biology required. A dedication to undergraduate education is essential. Xavier University is a small, Black, Catholic, liberal arts institution. Application deadline: 7 April 1988. Send resumé and three letters of recommendation to: **Search Committee, Biology Department, Xavier University, New Orleans, LA 70125.**

**BIOLOGY—SABBATICAL REPLACEMENT.** One-year appointment (late August 1988 to early May 1989) at the assistant professor rank. Appropriate doctorate required. Duties include teaching anatomy and physiology, microbiology, pathophysiology, and non-majors general biology. Send letter of resumé by 15 April 1988 to: **William Putnam, Dean, School of Natural Sciences and Mathematics, Mesa College, Grand Junction, CO 81502.** *Mesa College is an Affirmative Action/Equal Opportunity Employer.*

**CELL BIOLOGIST**—The Institute for Environmental Medicine of the University of Pennsylvania Medical Center seeks a cell biologist for a tenure-track appointment as assistant professor. Successful candidate will establish an independent research program and will supervise a core electron microscopy laboratory. Research areas of special interest include lipid-protein interactions, endocytosis, secretion, epithelial cell differentiation, macromolecular synthesis, and lipid peroxidation. Guaranteed salary support, a well-equipped laboratory, and generous start-up funds are available. Deadline for applications is 15 May 1988. Send curriculum vitae and statement of research interests to: **Cell Biology Search Committee, c/o Maureen Doran, Executive Assistant, Institute for Environmental Medicine, University of Pennsylvania, One John Morgan Building, 36th Street and Hamilton Walk, Philadelphia, PA 19104-6068.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

The University of Illinois is searching for candidates to **CHAIR THE DEPARTMENT OF PATHOLOGY** at its College of Medicine at Peoria. The Institution at Peoria, one of four regional sites, provides a program in medical education for 160 M-2, M-3, and M-4 students. The College utilizes hospital-based pathologists to conduct its undergraduate teaching program in pathology. Support for further departmental development is available. Candidates should have a record of excellence in teaching undergraduate medical students, a commitment to excellence in research and demonstrated administrative abilities. Opportunities for service are available. Although an M.D. is preferred, candidates with a Ph.D. in pathology will be given serious consideration. Initial inquiries will be confidential. Interested candidates should send curriculum vitae to: **Phillip C. Jobe, Ph.D., Pathology Search Committee, University of Illinois College of Medicine at Peoria, Box 1649, Peoria, IL 61656.** Preference will be given to applications received prior to 30 May 1988. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**CELL/DEVELOPMENTAL BIOLOGIST**, non-tenure track, assistant professor level, beginning August 1988. Ph.D. and strong interest in undergraduate teaching required. Collaborative research with members of the cell biology group is encouraged. Send résumé and three letters of reference by 1 April 1988 to: **Dr. Kathy A. Suprenant, Department of Physiology and Cell Biology, University of Kansas, Lawrence, KS 66045. Affirmative Action/Equal Opportunity Employer.**

### CELLULAR IMMUNOLOGIST

The Department of General Surgery at Rush-Presbyterian-St. Luke's Hospital of Rush University invites applications for a full-time position as assistant professor and associate scientist. Interested applicants must have an M.D. and/or Ph.D. degree with experience in basic tumor and transplant immunology. Ongoing investigations include: phenotypic and functional characterization of tumor-infiltrating leukocytes, therapeutic potential of large granular lymphocytes in bone marrow transplantation, flow cytometric analysis of solid tumors, and predictors of rejection in renal and hepatic transplantation. Qualities of the successful applicant should include the ability to pursue a research program bridging basic laboratory investigation with clinically relevant problems in oncology and transplantation. Interested persons should submit curriculum vitae and three letters of recommendation to:

**Steven G. Economou, M.D., Chairman**  
Department of General Surgery  
Rush-Presbyterian-St. Luke's  
Medical Center  
1653 West Congress Parkway  
Chicago, IL 60612

### CHAIRMAN DEPARTMENT OF BIOMEDICAL ENGINEERING UNIVERSITY OF TENNESSEE, MEMPHIS

Nominations and applications are invited for the position of Chair of the newly created Department of Biomedical Engineering in the College of Graduate Health Sciences beginning summer, 1988.

Candidates must possess a doctoral degree in biomedical engineering or in a related discipline, a demonstrated record of achievement in research and research training and in developing interdisciplinary programs in research, service, and graduate education. The department head will be expected to exert innovative leadership in recruiting new faculty lines including two chairs of excellence as well as in the development of a cooperative graduate degree program in Biomedical Engineering with the Herff College of Engineering at Memphis State University.

Application materials, including résumés and the names, addresses and telephone numbers of at least three references should be sent to:

**Ray H. Cypess, Dean**  
College of Graduate Health Sciences  
62 South Dunlap  
Memphis, TN 38163

Applications must be received by 15 April 1988, for full consideration.

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

### CHAIRPERSON OF DEPARTMENT OF BIOLOGY FOSTER G. MCGAW ENDOWED CHAIR

Lake Forest College invites nominations or applications for the Position of Chairperson of the Biology Department and Foster G. McGaw Chair in Biology. Candidates should present a strong record of teaching and scholarship and must be interested in involving undergraduate students in research. Any subfield of biology that is clearly an important element of a fine undergraduate program will be appropriate. The person appointed must demonstrate the quality of leadership that will develop a distinguished biology department. The chairperson will have the opportunity to replace most of the members of the department over the next few years. This appointment will be at a rank of associate professor or professor. Send nominations or applications with names of four references to: **Bailey Donnally, Dean of the Faculty, Lake Forest College, Lake Forest, IL 60045. Lake Forest College actively encourages applications from minorities and women.**

## POSITIONS OPEN

### CHAIRPERSON DEPARTMENT OF PSYCHIATRY UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE, UAB

The University of Alabama School of Medicine, UAB, is seeking a person to fill the position of Chairperson, Department of Psychiatry. The department is responsible for teaching medical students, residents, and graduate students in psychiatry and relevant areas of the neurosciences, as well as conducting multidisciplinary research on psychiatric disorders and related topics in the neurosciences. Patient care responsibilities include a comprehensive mental health center, inpatient and outpatient services, as well as substance abuse programs. A certificate of need for a new 90-bed psychiatric hospital has recently been obtained, and it is anticipated that construction of this facility will begin shortly.

UAB is strongly committed to research. Its medical research programs are undergirded by excellent basic science departments, facilities and state-of-the-art equipment and shared resources.

Inquiries and application should be received by 30 June 1988, and should be addressed to:

**Mrs. A. D. Hyche**  
Office of the Dean  
University of Alabama School of Medicine  
UAB Station  
Birmingham, AL 35294

*An Affirmative Action/Equal Opportunity Employer*

### DEVELOPMENTAL BIOLOGIST UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Developmental and Cell Biology, University of California, Irvine, invites applications for a tenure-track position in developmental biology at the assistant professor level. The department currently has twelve faculty working in tissue, cellular, or molecular aspects of development. We are seeking candidates working on molecular approaches to some aspect of embryonic development. Candidates will be selected primarily on the quality of their research, as opposed to the specific topic, but the department wishes to build strength in some specific areas, including molecular genetic aspects of pattern formation; molecular nature of cell determination; role of growth factors or oncogenes in development; and developmental neurobiology. Candidates working on any metazoan will be considered, but we are particularly interested in adding someone working with mammals. The successful candidate will be expected to direct a vigorous, independent, extramurally funded research program, to participate in the developmental biology graduate training program, and to teach at the undergraduate level. Applicants should submit curriculum vitae, copies of significant recent reprints, and concise statement of research accomplishments and plans, and arrange for three letters of reference to be sent to: **Chair, Developmental Biology Search Committee, Department of Developmental and Cell Biology, University of California, Irvine, CA 92717.** Applications should be received by 30 April 1988. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### DIRECTOR OFFICE OF RADIATION SAFETY

Washington State University invites applications/nominations for the full-time, non-tenured track faculty position of Director, Office of Radiation Safety. Salary \$35,000 to \$45,000 per year. Position is available 1 July 1988. Deadline for applications/nominations is 15 April 1988.

Candidates must hold a master's degree in the area of health physics, nuclear sciences, radiation safety or related area, have experience in handling of and knowledge of regulations relating to radioactive materials, and have communication skills. Ph.D. degree preferred and experience in administration and in dealing with users and state compliance officers desirable. Complete position description available upon request.

Send applications/nominations (including curriculum vitae and names of three references) to: **Dr. Mack I. Johnson, Associate Vice Provost for Research, Washington State University, Pullman, WA 99164-1030. Telephone: 509-335-3535.**

*Washington State University is an Affirmative Action/Equal Opportunity Educator and Employer. Protected group members are encouraged to apply and to identify their status.*

## POSITIONS OPEN

### NATIONAL SCIENCE FOUNDATION Washington, D.C. 20550 DIRECTOR, DIVISION OF INSTRUMENTATION AND RESOURCES

NSF's Directorate for Biological, Behavioral and Social Sciences is seeking qualified candidates for the position of Director, Division of Instrumentation and Resources. The Division coordinates support for infrastructure and research resources in the biological, behavioral, and social sciences. Emphasis is on multiuser instrumentation, instrumentation development, and biological facilities. In addition, the Division coordinates BBS cross-directorate programs and provides ADP support for the divisions within the Directorate.

This Senior Executive Service position, with a salary range of ES-1 (\$65,994) to ES-4 (\$73,400), is announced on a career appointment basis. Applicants must have a Ph.D. or equivalent experience in biophysics, structural biology or related discipline (e.g., biochemistry, molecular biology); substantial research contributions or innovative leadership in research administration in the biological sciences; and the ability to achieve organizational objectives through the supervision and management of subordinates.

Applicants should contact: **Margaret Cademartori on 202-357-7601** (hearing impaired individuals may call TDD 202-357-7492) to request Announcement EP 88-2 for complete qualification requirements and application procedures. Applications must be received by 15 April 1988.

*Equal Opportunity Employer*

**DIRECTOR OF STATEWIDE CYTOGENETICS PROGRAM.** Board-certified or -eligible cytogeneticist with experience and interest in molecular biology to direct established cytogenetics laboratory and initiate planning for a regional DNA lab. Primarily service obligations, but research strongly encouraged. The Cytogenetics and Molecular Cell Biology Laboratory is a Division in the Department of Medical Genetics/Montana Medical Genetics Program. Faculty appointment at Montana State University possible. Salary commensurate with training, experience and certification status. *An Affirmative Action/Equal Opportunity Employer.* Contact: **John M. Opitz, Shodair Hospital, Box 5539, Helena, MT 59604. Telephone 406-442-1980.**

### ECOLOGIST

The Department of Biological Sciences of the University of Pittsburgh is seeking an established scientist with a strong reputation in any branch of ecology. The successful candidate will help to develop the graduate program in ecology and evolution, and will serve as Director of the Pymatuning Laboratory of Ecology, a well-equipped field station located 100 miles north of Pittsburgh. Experience in generating external funding is important, and some administrative background would be desirable. The appointment will be made at the level of tenured associate or full professor, and will be available as early as September, 1988. One or two junior appointments will be made available in the next 2 years as a part of this program expansion.

Applications should include curriculum vitae, copies of recent publications, a statement of research interests and future plans, and the names and addresses of at least three potential references. Address applications to: **Ecology Search Committee, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA 15260. An Equal Opportunity/Affirmative Action Employer.**

### ECOLOGIST

The Department of Biology of Loyola University of Chicago, Lake Shore Campus, invites applications for a 9-month, tenure-track position at the level of assistant professor. A Ph.D. is required; postdoctoral experience is desirable. Individuals should be engaged in modern and imaginative research in experimental aquatic ecology. The successful candidate will develop an active, funded research program, direct graduate students, and teach undergraduate and graduate courses. Submit curriculum vitae, a description of research interests, and three letters of recommendation by 15 April 1988 to: **Dr. Robert Hamilton, Chairman, Search Committee, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626. An Equal Opportunity Employer.**

An *Uncommon* Opportunity

## BIOCHEMIST/DRUG METABOLISM

Marion Laboratories, Inc. is a dynamic company in the rapidly expanding health care industry. Due to our continued growth and expansion, the Preclinical Drug Metabolism group of the Biological Affairs Department is seeking a Ph.D. Biochemist interested in performing animal studies of disposition and pharmacokinetics of drugs in the discovery and development. This position will be located in Kansas City, Missouri.

The successful candidate will have at least three years of experience in drug metabolism, pharmacokinetics and drug analysis. Industry experience is desirable. The individual must possess superior oral and written communication skills to effectively interface with all levels of management.

We offer an excellent total compensation and benefits package including bonus, stock options, profit sharing, comprehensive group health, dental, and life insurance. Please send a detailed resume including salary history in confidence to: **Recruiting & Placement, Dept. PKH, P.O. Box 9627, Kansas City, MO 64134.** Equal Opportunity Employer.

 **Marion  
Laboratories, Inc.**

The *Uncommon* Company

## CANCER IMMUNOBIOLOGY

The University of Texas Southwestern Medical Center at Dallas has announced a new Cancer Immunobiology Program under the directorship of Dr. Ellen S. Vitetta. The plan is to develop the program into a new Center devoted to research on the immunobiology of cancer, with particular focus on leukemia/lymphoma.

The Program is located in a research complex that also houses the Howard Hughes Medical Institute, several other Centers conducting biomedical research, and an immunotoxin production laboratory to generate material for human clinical trials. The Program has access to central facilities, including common equipment, and animal rooms.

The first individuals are being recruited for September, 1988. Scientists are being sought at the associate or full professor levels to head groups which will interact to develop new approaches to the biology and therapy of lymphoid tumors. Their research will include tumorigenesis, dormancy, effector cells, lymphokines, immunotoxins and genetically engineered reagents. Such individuals should have strong backgrounds in either cell biology, molecular biology, pharmacology or tumor immunology.

Individual salaries, research space, and start-up funding are provided. Members of the Program may have academic appointments in basic and/or clinical departments and membership in graduate school programs. Investigators will be able to interact with clinicians at Parkland Memorial Hospital and the soon-to-be-completed University Hospital. Candidates must hold M.D. or Ph.D. degrees (or their equivalents) and must have a record of major research achievement.

Please address inquiries and applications (with *Curriculum vitae*, references and statements of interests) to:

**Dr. Ellen Vitetta  
Cancer Immunobiology  
University of Texas Southwestern Medical Center  
5323 Harry Hines Boulevard  
Dallas, Texas 75235-9048**

*The University of Texas Southwestern Medical Center at Dallas is an Equal Opportunity/Affirmative Action employer.*

## Postdoctoral Scientist Cell Biologist/Biochemist

The Department of Cell Biology at Smith Kline & French Laboratories, located near Valley Forge, Pennsylvania, is seeking a Cell Biologist/Biochemist to join the Department of Cell Biology to investigate the expression, processing and secretion of heterologous gene products in mammalian cells. Familiarity with a number of biochemical and immunological techniques (e.g., 1-D and 2-D gel electrophoresis, immunoprecipitation, epitope mapping and nucleic acid hybridization) is essential.

Candidates must have:

- Ph.D. in Cell Biology/Biochemistry or Biology.
- 0-2 years postdoctoral experience.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and full interaction with the scientific community.

We offer excellent compensation and benefits, and an attractive relocation policy. For confidential consideration, send your curriculum vitae and the names of three references to: Ms. Barbara J. Schwartz, S0028, R&D Associate Employment Administrator, Department of Human Resources, Smith Kline & French Laboratories, 709 Swedeland Road, King of Prussia, PA 19406-2799. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

ImmunoTherapeutics Inc., a public biotechnology company involved in the development of human immunopharmaceuticals, has three positions open immediately.

### VICE PRESIDENT

#### FOR RESEARCH & DEVELOPMENT

A senior-level position is open for an individual who will coordinate and direct research and product development. Knowledge of GLP and GMP essential. The individual will be responsible for patent matters.

### IMMUNOLOGIST

A senior-level position is open for an individual directly responsible for product research and development related to monoclonal antibodies, and for the evaluation of biological response modifiers in-vivo and in-vitro.

### PROTEIN CHEMIST

An organic-protein chemist position is open for an individual who holds a Ph.D. and has at least two years of experience. Major areas of responsibility are protein modification, protein purification and lipopolysaccharide purification.

ITI offers a competitive salary, benefits and a stock incentive/stock option program for these positions.



**IMMUNOTHERAPEUTICS INC.** <sup>TM</sup>

Reply with C.V. or resume and three references to Gerald Vosika, President and Research Director, ImmunoTherapeutics Inc., 3505 Riverview Circle, Moorhead, MN 56560; (701) 232-9575.



## POSITIONS OPEN

**ECOLOGIST:** Seaver College, the undergraduate liberal arts college of Pepperdine University is seeking applicants for a 1-year appointment (assistant professor level) in plant or animal ecology.

Ph.D. is preferred, although all-but-dissertation candidates will be given full consideration. The faculty member will teach a one-semester course in general ecology, general botany or general zoology for majors, and sections of biology for non-majors. Preference will be given to applicants who are effective teachers, although opportunities exist to supervise undergraduate student research projects. Pepperdine is an independent Christian University under the control of a self-perpetuating Board of Regents and is related to the Church of Christ.

Applications will be accepted until 15 April 1988, and should be addressed to: **Dr. Norman Hughes, Natural Science Division, Pepperdine University, Malibu, CA 90265.** *Minority and female applicants are encouraged to apply.*

**ECOLOGIST, ASSISTANT PROFESSOR.** One-year sabbatical replacement position for ecologist with botanical training. Commitment to undergraduate teaching and the Ph.D. (or near completion) required. Responsibilities include teaching ecology and field methods, participation in the biology core for majors, team-teaching a general biology course for non-majors, and team-teaching an interdisciplinary course in population, food, and poverty. Closing date for receipt of applications is 5 April 1988. Send curriculum vitae and three letters of reference to: **Dr. John T. Carlson, Department of Biology, Pacific Lutheran University (PLU), Tacoma, WA 98447.** *PLU is an Equal Opportunity/Affirmative Action Employer.*

### ENDOWED PROFESSOR AND HEAD BIOLOGY PROGRAMS THE UNIVERSITY OF TEXAS AT DALLAS

Applications are invited for the position of professor and head, Biology Programs, at The University of Texas at Dallas. The position will be supported by an endowed Professorship in Biology. The Biology Programs at The University of Texas at Dallas, formerly a private research institute, have a long history of research and graduate education in cell and molecular biology. The faculty are actively engaged in research in molecular and cell biology, graduate education at the Ph.D. level, and undergraduate education at the junior and senior levels. We seek a program head who will provide leadership and vision commensurate with the research and educational goals of the Programs. The successful candidate will have major input in the hiring of new faculty members and in the renovation of the space of the Biology Programs. Candidates should currently hold a tenure-appointment, have had experience in graduate education in molecular and cell biology or in related areas of biochemistry or biophysics, and have a current extramurally supported research program. The position is available from 1 January 1989 with a preference to fill the position before summer 1989. Applicants should submit curriculum vitae (*indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required*) by 15 July 1988 to:

**Academic Search #286  
The University of Texas at Dallas  
P.O. Box 830688  
Richardson, TX 75083-0688**

*The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.*

**EXTENSION POSTHARVEST HORTICULTURIST:** The Department of Vegetable Crops and the Division of Agriculture and Natural Resources, University of California, Davis, seek applicants for an academic, 11-month, 3-year career-track position. Primary responsibility will be to conduct research and education programs on postharvest aspects of transportation and marketing of fresh horticultural commodities. Candidates must have a Ph.D. in horticulture, plant physiology, or related areas. Expertise in postharvest is essential; in plant pathology, marketing, or engineering is desirable. Send a letter of application, curriculum vitae, transcripts, and names and addresses of four references by 16 May 1988 to: **Marita Cantwell or Shang Fa Yang, Department of Vegetable Crops, University of California, Davis, CA 95616.** Telephone: 916-752-1410. Refer to #A-88-027. *Affirmative Action/Equal Opportunity Employer M/F/H.*

## POSITIONS OPEN

### ENVIRONMENTAL TOXICOLOGIST

NASA Johnson Space Center invites applications for an Environmental Toxicologist position. Applicant should have academic training and/or experience in at least two of the following areas: toxicological risk assessments, environmental health, inhalation toxicology, and analysis of gases. Duties will include evaluation of toxicological hazard potentials of a variety of spaceflight experiments and operations, and establishing standards for controlling these hazards. Inhalation and other types of toxicology research opportunities are available. Send curriculum vitae with references to: **P. J. Cleary, NASA Johnson Space Center, Code AH73, Houston, TX 77058.** *NASA is an Equal Opportunity Employer.*

### EVOLUTIONARY BIOLOGY

Department of Biological Sciences of Rutgers University is searching for an **ASSISTANT OR ASSOCIATE PROFESSOR** in evolutionary biology, particularly a scientist working on evolutionary questions by using modern molecular techniques, with any group of organisms. Applicants must have demonstrated research achievement, and develop an active, funded research program, teach, and participate in a large ecology and evolution graduate program within a diverse Department. Excellent start-up funds and laboratory facilities. Send, preferably by 15 April 1988 résumé, statement of research interests, reprints, and names of three references to: **Professor Steven N. Handel, Chair of Evolution Search, Department of Biological Sciences, Rutgers University, Piscataway, NJ 03855-1059.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

Temple University, Department of Medicine, Section of Pulmonary Disease and Critical Care Medicine, seeks to recruit several new **FACULTY MEMBERS.** Individuals with well-defined research interest in the following areas of investigation are being sought: Physiology and biochemistry of smooth muscle contraction; structure, function and biological properties of respiratory epithelial cells; neuropharmacology of airway tissues. Positions are available at the assistant, associate professor, and professor rank. Send résumés to: **Dr. S. Kelsen, Chief, Section of Pulmonary Disease and Critical Care Medicine, Temple University Health Sciences Center, 931 Parkinson Pavilion, Broad and Tioga Streets, Philadelphia, PA 19140.**

### FACULTY POSITIONS MOLECULAR AND CELL BIOLOGY PENN STATE

Applications are invited for faculty positions at any rank in the Department of Molecular and Cell Biology. We seek exceptional candidates whose research interests encompass any area of molecular and cell biology but special consideration will be given to those whose research complements our areas of strength and future interest including (i) prokaryotic molecular genetics, regulation, development, and pathogenesis; (ii) structure/function of proteins, and macromolecular interactions; and (iii) eukaryotic cell proliferation, differentiation, interactions, immune mechanisms, and regulation of gene expression.

Candidates are expected to have exceptional research credentials and a commitment to teaching at the graduate and undergraduate levels in one or more of the disciplines represented by the Department. The Department is contemporary and vigorous and is responsible for research and teaching programs in biochemistry, microbiology and molecular and cell biology. The Department has 30 research faculty and 80 graduate students. We maintain an aggressive research environment and encourage cooperative and interdisciplinary projects within and outside of the Department. Strong interactions exist with the Chemistry Department, the College of Agriculture, and the newly established Biotechnology Institute with which joint appointments may be possible. Applications will be reviewed starting 1 May 1988 and continue until the positions are filled. Candidates should submit a résumé including a statement of research interests and goals, copies of no more than three recent publications and the names, addresses, and telephone numbers of at least three references to: **Dr. Robert W. Bernlohr, Chairman of the Search Committee, Department of Molecular and Cell Biology, 108G Althouse Laboratory, The Pennsylvania State University, University Park, PA 16802.**

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

## POSITIONS OPEN

### FACULTY POSITION COLUMBIA UNIVERSITY DEPARTMENT OF ANATOMY AND CELL BIOLOGY

The Department of Anatomy and Cell Biology seeks applicants for a tenure-track faculty position for a candidate with background and teaching experience in gross human anatomy, who is interested in participating in the development of computer-assisted instruction and is capable of establishing an independent research program in cell biology, cellular neurobiology, or a related area. Please send curriculum vitae, statement of research goals, and the names of three professional references to: **Dr. Michael D. Gershon, M.D., Chairman, Department of Anatomy and Cell Biology, Columbia University, College of Physicians and Surgeons, 630 West 168 Street, New York, NY 10032.** *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION IN MOLECULAR PHYSIOLOGY/BIOLOGY

The Department of Physiology at the Medical College of Wisconsin is seeking an investigator at the assistant/associate professor level for a tenure-track position in the area of molecular genetics. Applicants will be expected to develop a research program in an area related to cardiovascular and/or renal physiology, and interact with cellular and integrative physiologists in a collaborative research program investigating arterial blood pressure regulation. Candidates experienced in molecular techniques for studying membrane function, contractile proteins, hormone synthesis, and endothelial or vascular muscle cell growth are especially desired. Teaching responsibilities include participation in graduate and medical school courses. The Department of Physiology offers a cooperative scientific environment and is located in a modern facility. A new building connected to the Department of Physiology is presently being constructed, which will house an interdepartmental molecular biology affinity group with varied research interests. Applicants should send curriculum vitae, a statement of career objectives, and the names of three references to: **A. W. Cowley, Jr., Ph.D., Professor and Chairman, Department of Physiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.** *An Equal Opportunity Employer.*

**FACULTY POSITION—GENETICIST:** Ph.D., must maintain active research, supervise M.S. students, consult and collaborate with biology faculty and the community. Demonstrated record of research productivity in cellular/organismal genetics as shown by publications and funding. Excellent teaching is required in three to four assigned genetics courses and in a general biology class. Position is in a vigorous department of 16 faculty on an 8000-student university located at Cheney and Spokane, a region that offers a high quality of life. Renewable 1-year term appointment at assistant professor level to start September 1988. Send curriculum vitae, statement of research interests and three letters of recommendation to: **Geneticist Search Committee, Department of Biology—MS #72, Eastern Washington University, Cheney, WA 99004-9989.** *Equal Opportunity Employer/Affirmative Action.*

The Center for Molecular Biology invites applications for three tenure-track **FACULTY POSITIONS** for summer 1988 to early 1989 hire date, at the level of assistant, associate, or full professor. Tenure will be in an appropriate department. Multiple research-track faculty positions at the level of assistant, associate, or full professor (research) are available with the same hire dates. Generous start-up funds are available. These positions are a part of a major University-wide expansion in molecular biology. The focus of the Center is on health-related research. Candidates with a Ph.D. or M.D. degree, postdoctoral experience, and demonstrated research excellence in an appropriate area of molecular biology will be considered. Send applications (deadline: 1 June 1988) including curriculum vitae, the names of at least three references, and a statement of future research plans to:

**Orlando J. Miller, Director  
Center for Molecular Biology  
Wayne State University  
540 East Canfield  
Room 1201 Scott Hall  
Detroit, MI 48201**



## POSITIONS OPEN

### FACULTY POSITION IN NEUROSCIENCES

The Department of Veterinary Biosciences has a tenure-track faculty position opening in the area of neurobiology. All candidates with research expertise in a modern neuroscience area will be considered, but preference will be given to physiologists/anatomists studying problems at the cellular and molecular levels. The candidate will be expected to develop an independent active research program as well as teach in the College's professional and graduate programs. Candidates with active independent research programs will be considered for senior level faculty appointments. Applicants should have a Ph.D. degree together with postdoctoral experience. Deadline for applications is 8 April 1988 or until position is filled. Submit curriculum vitae, description of research interests, and letters from three references to: **Dr. Hara Misra, Head, Department of Veterinary Biosciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061.**

*Virginia Tech is an Equal Opportunity/Affirmative Action Employer.*

### WEST VIRGINIA UNIVERSITY FACULTY POSITIONS IN PHARMACOLOGY/TOXICOLOGY

West Virginia University invites applications for two tenure-track positions at the assistant professor level. Applicants should have a doctoral degree in pharmacology, toxicology or related discipline and postdoctoral research experience. Research accomplishments and evidence of ability to develop independent, externally funded research will be prime considerations in the selection process. The positions will begin on or about 1 July 1988. Applicants should submit curriculum vitae, including complete bibliography, and request three letters of reference be sent to: **Dr. Robert E. Stitzel at the Department of Pharmacology and Toxicology, West Virginia University Medical Center, Morgantown, WV 26506** by 1 April 1988.

**TOXICOLOGIST:** Preference will be given to applicants whose research expertise focuses on the cellular, biochemical and/or molecular events of toxicity. Teaching responsibilities require a broad knowledge of toxicology.

**PHARMACOLOGIST:** Preference will be given to those applicants whose research expertise focuses on the cellular, biochemical and/or molecular aspects of pharmacology. Teaching responsibilities require a broad knowledge of pharmacology.

*West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

**TWO FACULTY POSITIONS IN FOOD SCIENCE AND NUTRITION.** Assistant Professor/Associate Professor, Department of Food Science and Nutrition, University of Minnesota, St. Paul. Tenure-track or tenured. Must have Ph.D. in nutrition, or related field. Apply by 10 May 1988 to: **Dennis A. Savaiano, Chair, Search Committee, Department of Food Science and Nutrition, University of Minnesota, 1334 Eckles Avenue, St. Paul, MN 55108. Telephone: 612-624-6232.** Application includes curriculum vitae and names and addresses of at least three references. Start on or before 1 September 1988.

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

### HEAD DEPARTMENT OF ANIMAL SCIENCE

The College of Agriculture and Life Sciences of North Carolina State University is searching for an outstanding individual to administer the teaching, research and extension programs of the Department of Animal Science. Candidates for the position should have a Ph.D., and an excellent professional reputation in an animal science or related field. Administrative experience or demonstrated leadership potential in academic affairs, research, and extension is preferred. Write for a complete job description or apply by sending a letter explaining interest, qualifications, résumé and request three letters of reference by 15 May 1988, to: **Dr. B. E. Caldwell, Chairman, Search Committee: Box 7620, North Carolina State University, Raleigh, NC 27695-7620.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

18 MARCH 1988

## PHARMACEUTICAL SCIENTISTS

R.P. Scherer Corporation is an international developer of drug formulations and delivery systems and the world's largest producer of softgels (soft gelatin capsules) for the pharmaceutical and nutritional supplements industries. The firm also provides other diversified health care products and services.

R.P. Scherer has established a new pharmaceutical research and development center in Ann Arbor, Michigan. Ann Arbor offers an exceptional quality of life including a wide variety of sophisticated cultural and educational environments with a seemingly affordable high standard of living.

Positions are available for staff with experience at all levels of education to work in new and exciting areas of drug delivery research:

- **Development Pharmacists (Ph.D.)**—Responsible for design and development of unique drug delivery systems. 1-5 years experience.

- **Development Pharmacists (M.Sc., B.Sc.)**—Laboratory experience in formulation and development. 1-5 years experience.

If you would like to join a new and exciting research enterprise, please send your resume for consideration to:

**R.P. Scherer Corporation**  
**Personnel Manager, Dept. SM318**  
**P.O. Box 6070 • Troy, MI 48007**  
Equal Opportunity Employer M/F/H/V

**Rp Scherer**

## Assistant or Associate Scientist

Applications are sought to fill two tenure-track positions in the Department of Chemistry at the Assistant or Associate Scientist level. The openings are in the general areas of isotope chemistry (stable and/or radioisotopes) and in any area of organic biogeochemistry. Applicants should have a PhD, preferably post-doctoral experience, and a strong background in basic physical, organic or analytical chemistry as applied to the study of chemical rates and processes in marine systems. Please send a letter of inquiry and curriculum vitae including a statement of research interest to:

**Chairman, Chemistry Department**  
**P.O. Box 54P**



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**Woods Hole, MA 02543**  
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## National Institutes of Health U.S. Public Health Service NATIONAL INSTITUTE OF NEUROLOGICAL AND COMMUNICATIVE DISORDERS AND STROKE Staff/Senior Staff Fellowship

The Surgical Neurology Branch (SNB), Division of Intramural Research (DIR), National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), National Institutes of Health (NIH), Public Health Service (PHS), announces a Staff Fellowship opening. This postdoctoral tenure-track fellowship is available to study the cell biology, endocrinology or molecular biology of the pituitary gland and pituitary tumors. The appointee will be expected to initiate independent research. SNB seeks a scientist who can relate laboratory efforts to clinical pituitary problems and who is eager to interact with an active pituitary surgery program.

For the NIH Staff Fellowship Program, candidates must be U.S. citizens or resident aliens within four (4) years of receiving U.S. citizenship, and must either have been awarded their doctoral degree in fields closely related to the position, or have been certified by a university as meeting all the requirements leading to such a doctorate. Candidates with less than 3 years of professional level post-doctoral research experience may be considered for entrance into the program as Staff Fellows (SF). Senior Staff Fellowships (SSF) may be considered for those having 3 to 7 years of professional level post-doctoral research experience. The salary ranges for the SF Program are \$20,000pa (PhD's)/\$24,688pa (MD's) to \$35,491pa (PhD's)/\$37,997pa (MD's). The salary ranges for the SSF Program are \$24,000pa (PhD's)/\$28,000pa (MD's) to \$42,600pa (PhD's)/\$49,266pa (MD's). Starting salary is commensurate with experience. The initial appointment is for two (2) years with additional extensions of up to five (5) years possible, for a total of seven (7) years in the program.

Further position information and qualifications requirements may be obtained by calling Clifford Schein on (301) 496-6334. The position is located in Bethesda, Maryland. Interested candidates should send a curriculum vitae, a brief statement of research interests and the names of three (3) references to:

**Dr. Edward H. Oldfield**  
Chief, Surgical Neurology Branch  
DIR, NINCDS  
Building 10, Room 5D37  
National Institutes of Health  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: (301) 496-5728

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## POSITIONS OPEN

**FACULTY POSITION**—Department of Avian Medicine, the University of Georgia. Basic research position requiring Ph.D. degree, responsibility for graduate student training. Biotechnology skills and postdoctoral training or equivalent desirable. Rank and salary open. Receipt of applications deadline is 1 May 1988. Inquiries should be directed to: **Dr. Oscar J. Fletcher, Head, Avian Medicine, 953 College Station Road, Athens, GA 30605. An Equal Opportunity/Affirmative Action Institution.**

**FELLOW**—at the University of Cincinnati. To study the genetic regulation of globin synthesis, especially in reference to the fetal hemoglobin switch. Research activities will entail cloning DNA from putative regulatory regions of human genes, and studying their expression in appropriate expression vectors. Ideally, candidates should have prior training in molecular genetics. For applicants with the M.D. the fellowship can be structured around either medical genetics or hematology.

Send curriculum vitae to: **Donald L. Rucknagel, M.D., Ph.D., Comprehensive Sickle Cell Center, Children's Hospital Medical Center, Elland and Bethesda Avenues, Cincinnati, OH 45229.**

*An Equal Opportunity Employer*

## HUMAN GENETICS

The Wadsworth Center invites applications for two tenure-track **STAFF SCIENTIST** positions equivalent in rank to an assistant professor. Both positions require the applicants to possess a Ph.D. or M.D., have postdoctoral experience, and have an interest in molecular genetics applied to the human genome.

Position 1: Candidates are sought who are applying modern experimental approaches to the study of the human genome. They will be expected to carry out a vigorous independent program in basic human genetic research.

Position 2: Candidates are sought whose particular interests are the application of probe technologies to cytogenetic rearrangements, human genome probe libraries, genetics diagnostic probe techniques, and the development of quality assurance programs for probe technology with opportunities to pursue human genetic research.

The Wadsworth Center is a research-oriented institution with a staff of over 150 scientists. It offers a unique opportunity to engage in state-of-the-art research programs which have impact on public health. Both positions can include participation in the new SUNY Public Health Sciences graduate school program. Send curriculum vitae to: **Dr. Lorraine Flaherty, Laboratory of Immunology or Dr. Ann Willey, Laboratory of Human Genetics, Wadsworth Center for Laboratories and Research, P.O. Box 509, Albany, NY 12201.**

## INDUSTRIAL POSITIONS

H. T. McCormick Associates, Inc., a nationally recognized executive search firm, has exclusive openings for the following positions: **ASSOCIATE MEDICAL DIRECTOR:** Drug Regulatory Affairs M.D./Ph.D. required. **ASSOCIATE MEDICAL DIRECTOR:** Internal Medicine. **ASSOCIATE MEDICAL DIRECTOR:** Infectious Diseases. Board-certified M.D. **ASSISTANT CLINICAL RESEARCH DIRECTOR:** M.D. with research/fellowship training in cardiovascular medicine. Six figure compensation. **DIRECTOR OF IMMUNOLOGY:** Monoclonal antibody production. **DIRECTOR OF IMMUNOASSAY DEVELOPMENT:** Ph.D. Immunology. Some industrial experience. To \$70,000. **PRINCIPAL RESEARCH SCIENTIST:** Tumor biologist to develop new in vivo human and murine tumor models. Experience in use of athymic nude mice for propagation of human tumors. **SENIOR RESEARCH SCIENTISTS:** infectious disease, cardiovascular and atherosclerosis assays. Ph.D. in immunology, pharmacology, biology. Some industrial experience. To \$65,000. **SENIOR RESEARCH SCIENTIST:** Ph.D. biochemist for blood platelet development. To mid-\$50,000. **CLINICAL RESEARCH AUDITORS:** To mid-\$40,000. Submit curriculum vitae in confidence to: **Ann F. Lees, Director of Scientific Recruitment, H. T. McCormick Associates, Inc., P.O. Box 1206 Princeton, NJ 08540; or 3086 Route 27, Suite #5, Kendall Park, NJ 08824; or facsimile number: 201-297-7391.**

## POSITIONS OPEN

### CHEMICAL EDUCATION FOR PUBLIC UNDERSTANDING PROGRAM (CEPUP)

Salary range: \$31,800 to \$52,000 annual. The project is seeking two **INSTRUCTIONAL DEVELOPERS** to develop instructional materials to work in classrooms and with public groups. Qualifications: M.S. or Ph.D. degree in sciences or science education, experience working with teachers, developing instructional materials and/or related experience. Strong academic background in chemistry and/or physics required. Submit résumé, application letter describing qualifications, and names and addresses of three professional references to: **CEPUP, Lawrence Hall of Science, University of California, Berkeley, CA 94720.** Application deadline: 15 April 1988. Anticipated starting date: 1 July 1988, or by agreement. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**INSTRUCTOR OR VISITING ASSISTANT PROFESSOR** in ecology/evolution or cell biology/genetics for 1-year appointment with possible renewal, to begin 1 September 1988. Major teaching responsibilities in large introductory biology course (ecology, cell or organismic biology) and possibly an appropriate advanced course. Preference for candidates with strong teaching credentials. Ph.D. required for assistant professor, master's degree for instructor level. Salary commensurate with rank and experience. Send résumé, transcripts, and three letters of recommendation by 4 April 1988 to: **Dr. Timothy S. Wood, Visiting Faculty Search Committee, Department of Biological Sciences, Wright State University, Dayton, OH 45435.**

*Wright State University is an Equal Opportunity/Affirmative Action Employer.*

Boston Biomedical Research Institute (BBRI) invites inquiries from **INVESTIGATORS** who would like to work in central Boston in a private, non-profit, basic research organization with excellent facilities, where achievement in research is the major commitment. The successful candidates will be expected to obtain grant support. The Institute would especially like to expand its research in cell biology, immunology, and neurobiology, but applications from innovative investigators in other biomedical fields would also be welcomed. There is no deadline for application. A résumé and a brief description of research interests should be addressed to: **The Executive Director, Boston Biomedical Research Institute, 20 Staniford Street, Boston, MA 02114.** *BBRI is an Equal Opportunity Employer.*

**LABORATORY DIRECTOR/RESEARCH ASSISTANT PROFESSOR** sought for Blood Vessel Research Group. Responsibilities include: administration of laboratory activity, supervision of research in vascular pharmacology, conduction of independent research and teaching of graduate and undergraduate students. The candidate is required to have a Ph.D. in vascular pharmacology. This position is nontenure track and the candidate is expected to compete for external funding. Applicants must send letter of application, curriculum vitae, and four letters of reference by 1 April 1988 to: **John A. Bevan, M.D., Department of Pharmacology, College of Medicine, University of Vermont, Burlington, VT 05405.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### MEDICAL MICROBIOLOGY FACULTY POSITION

Applicants are invited for a tenure-track position at the assistant/associate professor level. Previous teaching experience in pathogenic bacteriology and demonstrated potential for independent research are desirable. Responsibilities include teaching medical, podiatric, and physician assistant students. Research interests are open, and limited institutional funds are available. Rank and salary are dependent on qualifications and experience. Send curriculum vitae, and names of three references to: **William J. Dyche, Ph.D., Associate Dean for Pre-Clinical Affairs, University of Osteopathic Medicine and Health Sciences, 3200 Grand Avenue, Des Moines, IA 50312.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

### MANAGER CHILDHOOD AMPUTEE CENTER

Mary Free Bed Hospital and Rehabilitation Center has an immediate opening for the Manager of Specialty Rehabilitation program servicing children with limb deficiencies. Responsible for directing multi-disciplinary programs, developing/coordinating research activities. Opportunity for academic affiliation. Master's degree in health care specialty required, research experience/additional research training preferred. Send résumé including salary history to:

**Medical Director  
Mary Free Bed Hospital and  
Rehabilitation Center  
235 Wealthy SE  
Grand Rapids, MI 49503  
Equal Opportunity Employer**

### MARINE BACTERIOLOGIST

The Department of Oceanography at Texas A&M University in College Station, Texas, is seeking a marine bacteriologist for a tenure-track position at the assistant or associate professor level, beginning 1 September 1988. Emphasis will be placed on potential contributions that the candidate can make to ongoing interdisciplinary efforts in the areas of sediment and water column biology and chemistry. Present studies emphasize organic matter cycling and nutrient regeneration. Salary and rank are dependent on qualifications. The Department of Oceanography is in the College of Geosciences and includes 30 full-time faculty in disciplines of biology, chemistry, physics, and the earth sciences; the Geochemical and Environmental Research Group; a Multidisciplinary Modeling Group, the international office of WOCE, and an Ecosystems Research Group. Facilities include an ROV and the 182-foot R/V *Gyre*. The Texas A&M University System includes the Texas Sea Grant Program, the headquarters of the Ocean Drilling Program, and research facilities with a running seawater system in Galveston. Please send letters of inquiry, résumé, statements of research and teaching interests, reprints, and names of three references to: **Dr. Eric Powell, Department of Oceanography, College Station, TX 77843.** Deadline for receipt of application material follows the date of this issue by 4 weeks. *Texas A&M is an Equal Opportunity Employer.*

**MEDICAL INSTRUMENTATION DESIGN ENGINEER**, 40 hours per week, 8:00 a.m. to 4:00 p.m., \$30,780 per year. Will design, develop, and implement measurement transducers for controlled biological and physical measurement devices using optical, thermal and magnetic sensors. C-language and assembly programming languages are used for optimizing simulation of experimental data and for microprocessor interface driver design and development. Utilization of analog and digital circuits for sensing, displaying and instrument design. Master of science degree in physics, and 6 months of experience as a medical instrumentation design engineer or 6 months of experience as a systems programmer required. Experience must include work with analog and digital circuitry or applicant must have a bachelor of science degree in electrical engineering. Six months of prior experience must include the use of C-language and assembly programming languages. Send résumés to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605.** Attention: **L. Donegan, Reference #7831-L.** An employer paid ad.

### MOLECULAR GENETICIST

Nathan S. Kline Institute, Orangeburg, New York, is seeking to fill a research scientist position immediately. A Ph.D. in biochemistry or molecular biology is required for projects involving the molecular bases and biochemical regulations of genetic differences in brain neural transmission. Applicants should have a good background in recombinant DNA techniques, and experience with preparations and analysis of mammalian DNA, construction and screening DNA libraries, vector construction, Southern blotting, RFLP analysis and enzyme assays. Salary commensurate with experience. We are located in Orangeburg, 20 minutes from New York City. Submit curriculum vitae, list of publications, recent reprints, and three letters of recommendation to: **Dr. Csaba Vadasz, Laboratory of Neurobehavioral Genetics, Nathan S. Kline Institute, Orangeburg, NY 10962.**

**FACULTY AND POSTDOCTORAL  
POSITIONS AT THE DENTAL  
RESEARCH CENTER, UNIVERSITY  
OF MEDICINE AND DENTISTRY  
OF NEW JERSEY-NEW JERSEY  
DENTAL SCHOOL.**

Applications are invited for positions at the newly-established Research Center. Seeking D.D.S., Ph.D or M.D. individuals with interest and experience in the area of chemistry and function of salivary and gastrointestinal secretions. Preference will be given to molecular biologists, biochemists, immunologists, or physiologists pursuing research in glycoprotein synthesis and processing, biochemical pharmacology, enzymology, lipid and protein metabolism, connective tissue and bone mineralization, membrane receptors and signal transduction, and immune and nonimmune mechanisms in the health of the oral cavity. Excellent salary/benefits. Send resume, statement of interests, and references, to: **Dr. B.L. Slomiany, Director, Dental Research Center, UMDNJ-New Jersey Dental School, (S), 110 Bergen Street, Newark, New Jersey 07103-2425.**

The UMDNJ is an Affirmative Action/  
Equal Employment Opportunity Employer M/F/H/V.



# COLUMBIA UNIVERSITY

## Vice Provost for Research & Technology Development

Columbia University invites applications for the position of Vice Provost for Research and Technology Development. The Vice Provost reports to the Provost of the University and works closely with the Vice President for Arts and Sciences and the Vice President for Health Sciences. The Directors of the Offices of Science and Technology Development and Projects and Grants report to the Vice Provost.

The Vice Provost will:

- provide leadership to the University in the planning, development and administration of research activities supported by government, foundations, and industry;
- facilitate collaboration between the University and private industry, partic-

ularly in the health sciences, the basic and applied sciences, and engineering;

*Qualifications:* Earned doctorate in science, medicine, or engineering, with a record of distinguished research experience and significant experience in an academic, governmental, or industrial setting. Candidates should possess an appreciation of university process and a demonstrated ability to develop and implement new programs.

Send curriculum vitae with letter of application including salary history before **April 3, 1988** to:

Auerbach Associates  
Box 2681  
Cambridge, MA 02238

Columbia University is an Affirmative Action, Equal Opportunity Employer.

## CHEMIST, MEDICINAL OR FORMULATION

The Acquired Immunodeficiency Syndrome (AIDS) Program of the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health is seeking a Medicinal Chemist or Formulation Chemist to join the Drug Development and Applications Section of the Developmental Therapeutics Branch. The Branch is responsible for planning and directing a federal program of extramural research projects for the discovery and preclinical development of potential therapies for the treatment of AIDS and its associated opportunistic infections. Major efforts presently underway or planned in the Section include dose ranging studies of experimental drugs in retrovirus-infected animals, pharmacokinetics of new agents in normal and diseased animals, preclinical toxicity studies of potential drugs, information exchange and planning of new initiatives. A Ph.D. or D.Pharm. in medicinal chemistry, formulation chemistry or related discipline is desired but not essential. Relevant experience in clinical drug formulation, drug synthesis, production scale-up and analytical chemistry may be considered as important as specific degree training. Salary range is \$39,501 - \$60,683 per annum.

U.S. citizenship is required. Send curriculum vitae, bibliography and names of references to Dr. Charles L. Litterst, NIAID/AIDS Program, Room 244p, 6003 Executive Boulevard, Bethesda, Maryland 20892.

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## TISSUE CULTURE CHEMIST

**SIGMA CHEMICAL COMPANY** employs hundreds of staff personnel at our St. Louis laboratory and manufacturing headquarters. Our biochemicals, diagnostic kits and reagents are distributed to a purity-conscious international market that relies on our integrity and professionalism. We have established a new and rapidly expanding line of tissue culture products. Several career opportunities to join this development team at Sigma now exist.

General requirements to join this development team include:

- An energetic and committed work ethic
- Minimum BS in science field with relevant and preferably broad academic and/or industrial experience
- Strong communication skills

In our Tissue Culture Production and Quality Assurance groups we are looking for people with the following specific experience:

- General tissue culture lab experience
- Scientific writing • Sterile filtration • GMP validation • GMP compliance

We can provide a competitive salary and a full company-paid benefits package. Send your confidential resume and salary history to:

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**Tissue Culture Chemist  
SIGMA CHEMICAL COMPANY  
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St. Louis, MO 63178**

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## POSITIONS OPEN

### MICROBIOLOGIST

Tenure-track position, assistant professor level, beginning August 1988; to teach undergraduate courses in microbiology, related areas (immunology or parasitology), and/or in general biology. Conduct research working with students. Ph.D., bilingual candidate (Spanish/English). Submit curriculum vitae, statement of teaching and research interests, and three letters of recommendation by 25 April 1988 to: **Dr. Ana L. Acevedo, Chairperson, Biology Department, University of Puerto Rico (UPR), Cayey, Puerto Rico 00633.** UPR is an Equal Opportunity/Affirmative Action Employer.

### MOLECULAR BIOLOGIST

A tenure-track position for an assistant professor with demonstrated experience in DNA repair mechanisms is anticipated for fall 1988 in the Department of Biological Sciences, Northern Illinois University. A Ph.D. and postdoctoral experience are required. The successful candidate will be expected to develop a vigorous, externally funded research program and direct graduate (M.S. and Ph.D.) students. Preference will be given to individuals experienced with prokaryotic or lower eukaryotic DNA repair mechanisms and able to contribute to the radiation biology program. Teaching obligations will involve the equivalent of one course per semester, occasionally including introductory biology courses. Northern Illinois University's proximity to Chicago also allows collaborative research with institutions such as Argonne National Laboratory.

Send curriculum vitae, statement of research goals, three most significant publications, and three letters of reference by 30 April 1988 to: **Dr. Marvin J. Starzyk, Chairman, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115-2861.** Telephone: 815-753-1753. The University is an Affirmative Action/Equal Opportunity Employer.

### MOLECULAR BIOLOGY

Applications are invited for one and possibly two **TENURE-TRACK POSITIONS** from persons with strong backgrounds in recombinant DNA technology, postdoctoral research experience and publications in molecular and/or cellular biology. One position will be at the assistant or associate professor rank, and the other will be open to all ranks. The positions will complement existing research programs in molecular and cellular biology. The appointees will be required to maintain an active research program and to teach courses in either genetics, microbiology, cell biology or biochemistry. The position will begin 15 August 1988, and the salary and rank will be commensurate with experience.

The faculty of the Department of Biological Sciences is strongly committed to research and to their responsibilities to offer both undergraduate and graduate programs. Oakland is a state-supported university on a 1,400-acre campus 25 miles north of Detroit.

Applicants should submit curriculum vitae, a brief description of their research plans, and have three referees send letters of recommendation before 1 April 1988 to:

**Dr. F. M. Butterworth, Chair Search Committee  
Department of Biological Sciences  
Oakland University  
Rochester, MI 48309**

*Affirmative Action/Equal Opportunity Employer*

### NMR SPECTROSCOPIST

Candidate must have a Ph.D. in Biochemistry and a minimum of 5 years of experience in the practical application of NMR spectroscopy to the elucidation of protein structure. Knowledge of all 2D techniques is essential and preference will be given to those with postdoctoral experience (preferably in the pharmaceutical industry) and who are experienced in protein isolation and purification. Experience in computer graphic techniques is also highly desirable.

The starting date is 1 June 1988 (or earlier, if required), with a yearly salary in the range of \$30,000 to \$35,000 depending on experience.

Applicants should send curriculum vitae including a full description of experience, relevant reprints, and the names of three referees to: **Dr. Neil MacKenzie, Department of Pharmaceutical Sciences, University of Arizona, Tucson, AZ 85721.** Telephone: 602-626-4898. Closing date for applicants is 9 April 1988.

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

## POSITIONS OPEN

**MEDICAL (Ph.D.) CYTOGENETICIST.** The California Prenatal Diagnosis Institute SPDI in San Jose, California, has a full-time position available for an experienced Ph.D. cytogeneticist (AMBG-eligible or certified with a minimum of 4 years of experience) at a cytogenetics prenatal diagnosis laboratory program. Successful candidates should be professionalized in amniotic cell, tissue, and blood cultures, photomicroscopic and darkroom skills, banded chromosome identification and karyotyping. Salary is commensurate with experience and competitive with San Francisco Bay area laboratories. Send résumé to: **CPDI, Post Office Box 9249, number 104, San Jose, CA 95157.**

### MOLECULAR VIROLOGIST—BIOCHEMIST.

The Institute for Molecular Virology and the Department of Biochemistry, University of Wisconsin-Madison seek applicants for a joint tenure-track, professorial appointment in the area of the molecular biology and biochemistry of viruses. Appointments will be considered at any level, but applicants in an expansion phase in their career will be given preference. Applicants must have an outstanding record of achievement in research in virology and biochemistry. They must have a research program suitable for training and supporting postdoctoral fellows and graduate students. They must have interest in and demonstrable aptitude for providing instruction to students in biochemistry. The deadline for receipt of applications is 20 April 1988. Applicants should request standard application forms or, alternatively, should submit vitae, a narrative description of their scientific interests and achievements, and the names of four referees. We especially welcome application by women and by minorities. *The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.*

Application forms may be obtained from and materials should be sent to:

**Paul Kaesberg, Chairman  
Institute for Molecular Virology  
1525 Linden Drive  
University of Wisconsin  
Madison, WI 53706  
608-262-2205**

### NUTRITION

**TWO TENURE-TRACK POSITIONS** available in Department of Home Economics, July, 1988. Appointees will be expected to establish strong research program in clinical, community, or experimental nutrition providing opportunities for training graduate students. Candidates should have ability to attract external funding and develop national recognition as scholar. Undergraduate and graduate teaching in nutrition and dietetics. One position will direct ADA Plan IV/V program. Ph.D. in nutrition required, RD and postdoctoral experience preferred. Closing date: 1 April 1988 or until suitable candidates are found. Send curriculum vitae, three letters of reference, transcripts, and statement of teaching and research interests to:

**Dr. Adria R. Sherman, Chair  
Department of Home Economics  
Rutgers University  
Davison Hall, Cook College  
New Brunswick, NJ 08903  
Telephone: 201-932-9516**

*An Equal Opportunity/Affirmative Action Employer.*

### PALEOZOIC INVERTEBRATE MACROPALEONTOLOGIST

U.S. Geological Survey, Branch of Paleontology and Stratigraphy, announces vacancy for invertebrate macro-paleontologist to study lower and/or middle Paleozoic rocks. Prefer applicants with Ph.D.; must be U.S. citizen. Prefer experienced, field-oriented researcher specializing in established biostratigraphically useful fossil group(s). Salary and grade negotiable based on career experience (salary range \$33,218 to \$60,683 per annum, GS-12 to GS-14). Duty station will be determined at time of selection.

Send application to: **A. G. Harris, U.S. Geological Survey, U.S. National Museum, E-501, Washington, DC 20560.** Telephone: 202-343-3495 by 15 April 1988; must include Standard Form 171 (Personal Qualifications Statement) available from above address or any Federal personnel office and complete list of publications.

*The U.S. Geological Survey is an Equal Opportunity Employer.*

## POSITIONS OPEN

**PHARMACOLOGIST.** Applications are invited for a tenure-track faculty position in the Department of Pharmacology, University of South Carolina School of Medicine. Ph.D. and/or M.D. degree and postdoctoral experience required. The successful candidate will be expected to develop an independent research program which merits extramural support and to teach medical/graduate students. Individuals should submit curriculum vitae, statement of professional goals, and the names of three references to: **Dr. D. O. Allen, Chairman, Department of Pharmacology, University of South Carolina School of Medicine, Columbia, SC 29208.** The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.

**PHYSIOLOGIST:** The Cerebrovascular Research Center Department of Neurology is seeking applications for a full-time research position at the level of assistant or associate research professor. The applicant must have had extensive laboratory experience in research on the cerebral circulation with a proven record of research accomplishments. Candidates should have a strong interest in cerebrovascular disease. Applicants should send curriculum vitae, a description of research interests, and three letters of reference to: **Dr. Martin Reivich, Cerebrovascular Research Center, 429 Johnson Pavilion, University of Pennsylvania, Philadelphia, PA 19104-6063.** The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.

**PLANT BIOCHEMIST:** Department of Biochemistry, University of Nebraska-Lincoln. A 12-month tenure-track position with 80% research and 20% teaching at the assistant or associate professor level. Will be expected to develop a plant research program that relies on modern biochemical and molecular biological techniques. A Ph.D. in biochemistry, or closely related area, and postdoctoral experience are required. Submit curriculum vitae, statement of research interests and plans, representative reprints, and three letters of reference by 2 May 1988 (or until suitable applicant is found thereafter) to: **Dr. Robert Klucas, Department of Biochemistry, 206 Biochemistry Hall, University of Nebraska-Lincoln, Lincoln, NE 68583-0718.** Telephone: 402-472-2932.

*Affirmative Action/Equal Opportunity Employer*

**PLANT GENETICS/SOYBEAN.** Applications are invited for a tenure-track **ASSISTANT PROFESSOR** position (80% research, 20% teaching). A Ph.D. degree in plant genetics or a related field, and a thorough knowledge of fundamental genetics at the whole plant and molecular level is required. Research will be directed toward soybean improvement. Participation in the genetics teaching program is expected. Direct applications to: **Dr. M. W. Phillips, Head, Department of Agronomy, Purdue University, West Lafayette, IN 47907.** Include a résumé, transcripts of all University degrees, and three letters of recommendation. *An Equal Opportunity/Affirmative Action Employer.*

### PLANT PHYSIOLOGIST

The South Dakota State University Biology Department invites applications for a 9-month, tenure-track position at the assistant professor level. The position requires undergraduate teaching of plant physiology and related graduate courses, guidance of graduate student research in plant physiology, and ability to obtain extramural funds to support an active research program. The applicant must have a Ph.D. degree with a specialization in plant physiology. Postdoctoral research experience in plant cell physiology is preferred. Applicants should submit by 18 April 1988, curriculum vitae, names and addresses of three references, a one-page statement of teaching goals and research objectives, and transcripts to: **Dr. C. H. Chen, Biology Department, South Dakota State University, Box 2207B, Brookings, SD 57007.** *Affirmative Action Opportunity/Equal Employment Opportunity Employer F/M.*

**POSTDOCTORAL ASSOCIATE:** NIH-funded project to study the neuroanatomy of the brain stem gustatory system. Experiments involve EM-HRP and autoradiography. Experience in neuroanatomy, immunohistochemistry or neurophysiology desirable. Send curriculum vitae and statement of research interests to: **Dr. Mark C. Whitehead, The Ohio State University, College of Dentistry, Department of Oral Biology, 305 West 12th Avenue, Columbus, OH 43210.**



# Opportunities In Biotechnology

Repligen Corporation is a leader in the application of Biotechnology to the health care and personal care markets. We are currently developing an AIDS vaccine and AIDS therapeutic products, products for the treatment of infectious diseases, cancer therapies and novel biocompatible personal care products. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of our efforts has created the following opportunities:

## Molecular Biology

**Research Associates** (200-9/26), MS or BS with 2 or more years' experience in Molecular Biology, Biochemistry or related field. Two openings exist for individuals having experience with gene cloning, sequencing and expression in procaryotic or eukaryotic systems; immunological and protein chemistry techniques helpful but not essential.

## Biorganic Chemistry

**Research Associate** (200-30), BS/MS in Biology, Chemistry or related field. This position in Biochemistry requires experience in enzyme purification and characterization. Relevant experience in assay development will be an advantage. Successful candidate will work independently as a member of a project team.

**Research Associate/Research Technician** (200-13), BS/MS. This position requires a solid background in chemistry or biochemistry. Experience with analytical techniques will be considered a strong asset.

Repligen Corporation offers a competitive salary, excellent benefits and equity participation. Please submit a cover letter, resume and references to the **Director of Human Resources, Repligen Corporation, One Kendall Square, Building 700, Cambridge, MA 02139.** (Please refer to job code number when applying.) An Equal Opportunity Employer.



**RepliGen**

# Drug Discovery Research

CIBA-GEIGY, a worldwide leader in ethical pharmaceuticals, has three positions open in its Drug Discovery Profiling Unit in Summit, NJ. All three positions require a demonstrated interest in pharmacological approaches to receptor function at the molecular level with emphasis in the following therapeutic areas; inflammation, osteo and rheumatoid arthritis and atherosclerosis.

The first position is for a PhD with 2-5 years of postdoctoral experience and a proven record of independent research capabilities. This is a supervisory position with responsibility for providing RIA support to other research groups on the Summit site. Good interpersonal skills and the ability to interact with outside clinical investigators would be advantageous. In addition, this individual is intended to provide the Unit with a strong focus in immunologically related disease modalities. Experience in receptor related research at the molecular level is essential.

The second position is for a BS/MS level with a background in biochemistry and/or pharmacology.

The third position is at the postdoctoral level for a person with a background in neuromodulatory peptide research and/or immunology interested in investigating receptor function in peripheral tissues using homogenate/intact tissue radioligand binding techniques.

All three positions require a strong sense of teamwork and the ability to focus on goal-oriented research related to drug discovery. The opportunity exists to interact with multidisciplinary therapeutic research units in the areas of atherosclerosis, inflammation and cardiovascular. Publication of experimental data is actively encouraged.

CIBA-GEIGY is located in a pleasant suburban environment in close proximity to New York City and offers competitive salaries with appropriate benefits. Please forward your resume, to: Mr. Al Aronson, The Pharmaceuticals Division, CIBA-GEIGY Corporation, Dept. 389, 556 Morris Avenue, Summit, NJ 07901. We are an equal opportunity employer m/f/h/v.

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## POSITIONS OPEN

### PLANT PHYSIOLOGIST/MODELER

Incumbent will assume project scientist role in the design and conduction of air pollutant effects studies on physiological/growth responses of forest seedlings and saplings, and in developing physiological process models for simulating and predicting the response of mature trees to air pollutants from experimental studies. Applicants must possess a Ph.D. (or equivalent) in plant physiology, forest science or closely aligned discipline relating to tree physiology and plant process modeling. Experience with the effects of air pollutants on plants is desirable. Send cover letter, résumé, transcripts (unofficial) and the names and addresses of three references to: Ms. Susan Carey, Northrop Services, Inc.—Environmental Sciences, 1600 S.W. Western Boulevard, Corvallis, OR 97333. Application deadline is 29 April 1988. *Equal Opportunity Employer.*

**PLANT/SOIL MICROBIOLOGIST.** The NifTAL Project, a leader in biological nitrogen fixation and *Rhizobium* ecology research, is recruiting a plant/soil microbiologist with interests in plant-microbe symbiotic systems research and development. The candidate is expected to develop an active research program, supervise research support personnel and advise graduate students. A Ph.D. in soil microbiology, crop physiology or forestry is required. Preference will be given to candidates with a proven ability to obtain extramural grant funds and experience in symbiotic associations with tropical trees. Submit résumé, reprints and drafts of manuscripts and names of three references to: Director, NifTAL Project, 1000 Holomua Avenue, Paia, HI 96779.

**POSTDOCTORAL ASSOCIATE** available on site-specific targeting of AIDS DNA. Background in molecular biophysics with experience in gel electrophoresis/DNA sequencing methodology desirable. Send curriculum vitae and three letters of recommendation to: Dr. James Dabrowski, Department of Chemistry, Syracuse University, Syracuse, NY 13244-1200. Deadline: 1 April 1988. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOW:** Cellular pharmacology of prolactin related to proliferation, drug effects, i.e., TCDD and cyclosporine on receptor binding, PKC, ornithine decarboxylase. Cell culture, RIA or EIA, Western and Northern blots. Opportunity to uncover new insight into cell function related to proliferative diseases. Salary commensurate with NIH guidelines. Résumé to: Diane H. Russell, Ph.D. Chair, Department of Pharmacology and Therapeutics, University of South Florida College of Medicine, 12901 30th Street, MDC-9, Tampa, FL 33612.

**POSTDOCTORAL FELLOW.** A position is open immediately for a Ph.D. with experience in molecular genetics (including cloning and expression) to participate in research using transgenic mice as animal models for Alzheimer disease, Down syndrome, and other human chromosomal disorders.

Send curriculum vitae, reprints, and names of three references to: Dr. Charles J. Epstein, Department of Pediatrics, University of California (UCSF), San Francisco, CA 94143-0106. UCSF is an Affirmative Action/Equal Opportunity Employer.

### POSTDOCTORAL FELLOW—NEUROBIOLOGY

A position is available immediately for a postdoctoral fellow (2-year duration) to isolate cDNAs/genes for receptor proteins that are relevant to the nervous system. Cloning will be followed by studies on structure/function relationships of receptors and on the mechanisms that regulate their gene expression. Candidates with a strong working knowledge in molecular biology will be favored; however, competent applicants with a related background will be considered. The research will be carried out at the newly established Fishberg Research Center for Neurobiology, in collaboration with the Department of Psychiatry at the Mount Sinai School of Medicine located opposite Central Park on Fifth Avenue, a few blocks "upstream" from the Guggenheim Museum. Salary: \$22,000 per annum. Please contact: Dr. Jurgen Brosius, Centre for Neurobiology and Behavior, Columbia University, 722 West 166 Street, New York, NY 10032. Telephone: 212-960-2245. *An Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE** in neurophysiology sought to study the canine model of the sleep disorder narcolepsy. The successful candidate will work in conjunction with existing expertise in *in vivo* voltammetry and dialysis. A multidisciplinary approach to examination of this disorder is underway in the lab of W. C. Dement at Stanford University, encompassing analytical neurochemical, receptor pharmacological, neuroimmunological, and molecular immunogenetic approaches to both human and canine forms of narcolepsy. Send curriculum vitae and three reference letters to: William C. Dement, M.D., Ph.D., Sleep Research Center, Department of Psychiatry TD-114, Stanford University School of Medicine, Stanford, CA 94305.

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITIONS** available to study the neurobiological and molecular bases of sleep and its disorders. At Stanford University a multidisciplinary approach is underway to understand fundamental sleep mechanisms and sleep disorders, integrating expertise in analytical neurochemistry, receptor pharmacology, neuroimmunology and molecular biology, as well as conventional sleep-state neurophysiology. Areas of research interest include neural and molecular bases of sleep, circadian rhythmicity, and mammalian hibernation. We particularly seek highly qualified and highly motivated individuals with experience in cellular neurophysiology, analytical neurochemistry, and/or molecular biology. Send curriculum vitae and three reference letters to: W. Craig Heller, Ph.D., Sleep Research Center, Department of Psychiatry TD-114, Stanford University School of Medicine, Stanford, CA 94305.

### POSTDOCTORAL FELLOWS

I have several postdoctoral positions available in my laboratory beginning 1 July 1988. Persons who have a background in pharmacology, physiology and biochemistry and who have an interest in cardiovascular pharmacology and physiology or in diabetes mellitus are urged to apply. A minimum of 1 year of funding is available, and it is hoped that the applicant would be eligible for fellowship funding for future years. Experience in isolated cardiac preparations and routine biochemical assays would be an asset.

Please write and enclose curriculum vitae and the names of three referees to:

John H. McNeill, Ph.D.  
Professor and Dean  
Faculty of Pharmaceutical Sciences  
The University of British Columbia  
2146 East Mall  
Vancouver, B.C.  
V6T 1W5  
Telephone: 604-228-2343

**POSTDOCTORAL POSITION** in the design, preparation, and development of new biodegradable, polymer-based delivery systems for vaccines with particular emphasis on application to sub-unit vaccines. Must have Ph.D. in polymer chemistry, pharmaceutical chemistry, chemical engineering, or related discipline. Salary \$21,000, plus fringe benefits. Send résumé and two letters of reference to: Professor Robert J. Linhardt, College of Pharmacy, University of Iowa, Iowa City, IA 52242. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION UNIVERSITY OF CALIFORNIA, IRVINE

A position to study the control of gene expression during morphogenesis in the opportunistic pathogen *Candida albicans*. Studies will involve gene cloning and transformation, together with other molecular biological techniques. Excellent training opportunities in molecular genetics in eukaryotic microbes. Send curriculum vitae and three letters of reference to:

Paul S. Sypherd  
Department of Microbiology and Molecular Genetics  
College of Medicine  
University of California  
Irvine, CA 92717

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## POSITIONS OPEN

**POSTDOCTORAL POSITION** available for a biochemist, chemist, or cell biologist to study specific proteases in biological and medical research using a newly developed technique. Send résumé and three letters of recommendation to: Professor C. W. Wu, Department of Pharmacological Sciences, SUNY Stony Brook, Stony Brook, NY 11794. *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK #51.

A **POSTDOCTORAL POSITION** is available to study the role of idiotype recognition in the humoral response to HIV infection and also in the context of auto-anti-idiotypic responses to ligands of physiological receptors. Projects involve T-cell recognition of idiotypes, studies of auto-anti-idiotypic responses, and preparation of monoclonal auto-anti-idiotypic antibodies to physiological receptors. Experience with the application of recombinant DNA technology to immunoglobulin genes is preferred. Send curriculum vitae and names of three references to: Dr. W. L. Cleveland, Department of Microbiology, Columbia University, 701 West 168 Street, New York, NY 10032. Telephone: 212-554-6929. Position is offered through: The Department of Medicine, St. Luke's/Roosevelt Hospital Center, 428 West 59th Street, New York, NY 10019. *An Equal Opportunity Employer M/F.*

**POSTDOCTORAL POSITION** for recent Ph.D. beginning July to September 1988 to study signal transduction mechanisms in chondrocyte differentiation. Modulation and reexpression of this phenotype are reversible and the latter is induced by change in cell shape or microfilament modification [*JCB* 106, 161-179 (1988)]. Research experience in biochemistry/cell biology is preferred. Send curriculum vitae including detailed summary of research experience and three letters of recommendation to: Dr. Paul D. Benay, Orthopaedic Hospital, 2400 South Flower Street, Los Angeles, CA 90007-2697. *An Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Available 1 July 1988. Organic chemist will synthesize radionuclide carrier molecules as part of a multidisciplinary program studying the toxic effects of internal emitters in cancer radiotherapy. Salary contingent on experience (NRSA Guidelines). U.S. citizenship or permanent residency status required. Please contact: Dr. A. I. Kassir, Harvard Medical School, SWRL, 50 Binney Street, Boston, MA 02115. Telephone 617-732-2184. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Study processing of macromolecules and receptor ligand interactions by bile duct epithelial cells. The applicant should be a recent Ph.D. with a strong background in cell biology and experience in morphology and cell culture. Send curriculum vitae, summary of research experience, and names of three references to: Dr. N. F. LaRusso, Mayo Medical School, Rochester, MN 55905. *An Equal Opportunity/Affirmative Action Institution.*

**POSTDOCTORAL POSITION** available for cell/molecular biological/immunological studies of the mechanisms of subcellular compartmentalization of  $\beta$ -glucuronidase within the endoplasmic reticulum [Medda *et al.*, *Cell* 50, 301 (1987)]. Available immediately. Send curriculum vitae and names and addresses of three references, and description of research experience and interests to: Dr. Richard T. Swank, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study bacterial degradation of organic pollutants found in groundwater. Emphasis is on development and study of strains able to degrade substituted aromatic compounds. Background in microbial physiology, molecular biology, and strain construction helpful. Position is at Tyndall Air Force Base, Panama City, Florida. Annual stipend range is \$30,800 to \$34,500. Doctoral degree received within 3 years of starting date required, as is U.S. citizenship or PRA status. Contact: Postgraduate Research/Tyndall, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.



## SENIOR RESEARCH SCIENTIST

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) PROGRAM, National Institute of Allergy and Infectious Diseases (NIAID/NIH) is seeking a senior level scientist in microbiology (to include virology), immunology or molecular biology, to serve as **Chief of the Pathogenesis Branch**. Responsibilities of the position include planning and directing major extramural research efforts in the areas of basic research into the biologic properties, molecular biology, and host response to infection by HIV and its sequelae in order to improve the basic understanding of the causative agents, to improve diagnostic and prognostic indicators, and to develop and improve methods of prevention and treatment. Applicants should have a Ph.D.; a broad background in microbiology, virology, immunology and molecular biology; postdoctoral laboratory research experience; experience in research program administration; publications in recognized refereed journals in field of scientific expertise, and knowledge of Federal Government extramural research program administration.

Salary range is \$54,907 to \$71,377. U.S. citizenship is required. Send curriculum vitae to: Daniel F. Hoth, M.D., Acting Director, AIDS Program, NIAID, NIH, Building 31, Room 7A48, 9000 Rockville Pike, Bethesda, Maryland 20892.

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## DIRECTOR Research & Development

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The Company, located in the attractive southwestern suburbs of Philadelphia, offers an entrepreneurial environment with unlimited opportunity for personal and professional advancement. The right candidate will be eligible for an extremely attractive compensation package.

Send C.V. and 3 References to:  
Director, Scientific Recruitment  
5 Prime → 3 Prime, Inc.  
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Paoli, PA 19301  
(215) 644-4710



5 Prime → 3 Prime, Inc.

## Opportunities in Biotechnology

For over 25 years, we have been investing our time and resources in the future of biotechnology. Today, our investment is paying off with outstanding career opportunities in this rapidly expanding field. Collaborative Research is a leader in the development, manufacture and marketing of biotechnology products and services for healthcare and industry.

### HUMAN GENETICS -

#### Post docs (temporary, 2 year positions)

**Scientific Computer Applications** - We seek an individual with research interests in applications of computing to human molecular genetics. Responsibilities will be to work with a Mathematician/Molecular Biologist in developing techniques for applying linkage analysis with DNA markers to the study of quantitative traits and complex diseases. A PhD in Genetics, Molecular Biology, Biology or Mathematics, programming ability, and knowledge of statistics are essential. Experience with molecular cloning techniques is desirable.

**Molecular Geneticist** - We are also seeking a Molecular Geneticist with expertise in state-of-the-art molecular techniques to apply to the genetics of humans and the development of medical diagnostics. The position requires a PhD in Genetics, Molecular Biology or related discipline.

For consideration, please submit your CV, list of publications and the names of 3 references to the Human Resources Dept. (S10), Collaborative Research, Inc., Two Oak Park, Bedford MA 01730. An equal opportunity employer.

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## POSTDOCTORAL RESEARCH SCIENTIST BIOCHEMICAL TOXICOLOGY

The Upjohn Company, a leader in research and development of pharmaceuticals, currently has an opening for a Postdoctoral Research Scientist in the Pathology and Toxicology Research unit.

The candidate selected for this position will participate in a research program studying the biochemical mechanisms of drug-and/or chemical-induced toxicity. Additional objectives include the development of new models/methodologies for the assessment of toxicity in animals or other test systems, and evaluation of their relevance to potential human health effects. Research results will be communicated to the world-wide community through publication in peer-reviewed journals.

Candidates should have a Ph.D. in toxicology or a closely related field and 0-3 years postdoctoral experience, with demonstrated experience in the biochemical/mechanistic approach to toxicology. Additionally, the candidate should possess excellent interpersonal skills to allow effective collaboration with scientists in Pathology/Toxicology and other research units.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers a very competitive salary, commensurate with experience and an outstanding benefits program.

For confidential consideration, please call toll free 1/800/253-8600 ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you. Please refer to Ad Number 20858-F when calling.

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## U.S. PATENT AND TRADEMARK OFFICE

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

**QUALIFICATIONS:** A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

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

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

**SALARY:** Dependent upon experience and qualifications.

**LOCATION OF POSITION:** Arlington, VA

For further information contact:

Patent and Trademark Office  
Office of Personnel, C&E  
CPK 1, Suite 700  
Washington, D.C. 20231  
703-557-3631  
Toll free: 800-368-3064

## ZOOLOGICAL INSTITUTE UNIVERSITY OF BASLE- SWITZERLAND

Two assistant positions are foreseen for 1 October 1988 in **Evolutionary Ecology and Population Biology**. Successful candidates will have demonstrated originality, rigor and productivity in using **evolutionary** insights to solve problems in ecology, genetics or behavior. One position will go to a person who can teach ethology and sociobiology, but research in this area is not a pre-requisite. Quality of research and prospects for fitting into a strong working group are more important than the particular question asked or the particular organism used. We seek a balance within the group between field and laboratory and between theory and experiment.

A doctoral degree and the ability to teach immediately in German are both required, and 2-3 years of postdoctoral experience is preferred. Successful candidates will be expected to direct independent research programmes, to seek their own grants, to offer an upper division undergraduate course in the area of their expertise and to teach in the core courses of the Zoology curriculum.

The term of appointment will be 3-5 years, and the salary will be in the range SFr. 50,000—70,000. Both will depend on experience and qualifications. Habilitation will be possible.

Please send a curriculum vitae, representative reprints and the name of two references by 30 April 1988 to:

Professor S. Stearns  
Zoologisches Institut  
Universität Basel  
Rhelnprung 9  
CH - 4051 Basel  
Switzerland



## Agracetus Research Assistants/ Technicians

Agracetus, a world leader in agricultural biotechnology, seeks innovative and self-motivated individuals to join our plant genetic engineering group. They will be part of an exciting program directed towards understanding and developing gene transfer and expression in plants. Candidates must have a B.S. or M.S. degree with one or more years laboratory experience in molecular biology. Letters of application should include a detailed description of experience with recombinant DNA techniques.

We offer a competitive salary, a comprehensive benefits package and advancement opportunity.

Please send your resume to: **Personnel Department, Agracetus, 8520 University Green, Middleton, WI 53562.**

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# MOLECULAR BIOLOGY— SENIOR SCIENTISTS—

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

The Sandoz Research Institute is seeking senior scientists to play vital roles in molecular biology research. These positions offer unique opportunities to develop creative, independent research programs utilizing recombinant DNA and other molecular biological technology to identify novel therapeutic approaches in the following areas: glucose regulation and diabetes mellitus, lipoprotein metabolism and atherosclerosis, monoclonal antibodies, and platelet activating factor and other mediators of inflammation and immune function. Successful candidates will work closely with interdisciplinary teams of intramural scientists and collaborate with extramural scientists.



Joseph P. Castellano  
Director, Human Resources 403/1  
**SANDOZ RESEARCH INSTITUTE**  
**SANDOZ**  
**PHARMACEUTICALS CORPORATION**  
East Hanover, New Jersey 07936  
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Requirements for these positions include a Ph.D. in Molecular Biology or closely related discipline, and a minimum of 2 years' postdoctoral experience in molecular biology preferably with emphasis on eukaryotic gene expression. In addition, you must have demonstrated ability to plan sound scientific projects, to conduct innovative independent research, to achieve research goals and to make significant intellectual contribution. A record of significant publications in major scientific journals as well as excellent written and oral communication skills are also required.

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

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

## Immunopharmacology

Immunopharmacology at Smith Kline & French Laboratories, located near Valley Forge, Pennsylvania, is seeking to fill several positions. These include a postdoctoral scientist in collaboration with the Department of Molecular Pharmacology and two outstanding scientists at either the Senior Investigator or Associate Investigator level. We are expanding current research programs studying the cellular-molecular pharmacology of suppressor cells, and mechanistic studies of cytokine and ligand-receptor interactions, and immunoregulation.

### Suppressor Cell Pharmacology (RI 1)

We are seeking a Postdoctoral Scientist to join a multidisciplinary team studying the cellular and molecular pharmacology of suppressor cell induction in an attempt to design novel therapeutic strategies for immunoregulation. The successful candidate will use a variety of *in vitro* and *in vivo* techniques to identify and characterize suppressor cell populations resulting from pharmacologic induction as well as the cellular and molecular mechanisms underlying these events.

We consider postdoctoral studies of major importance in an individual's career and encourage publication of findings in leading journals and full interactions with the scientific community. Our postdoctoral appointments are normally for two years duration. Candidates are required to have:

- Ph.D. in Immunology or Cellular Biology with 0-2 years Postdoctoral experience.
- Experience in *in vitro* and *in vivo* models of immunoregulation.

- Knowledge and interest in receptor interactions and molecular aspects of cell activation.

### Immunopharmacology (RI 2)

We have two openings for Senior Investigators (4-6 years postdoctoral experience) which could be filled at the Associate Senior Investigator level (2-4 years postdoctoral experience). These individuals will be involved in a multidisciplinary research effort focused on mechanistic and immunoregulatory studies of receptor-ligand interactions for the development of novel immunomodulatory/immunoregulatory moieties. Both lymphocytes and macrophages are targets. Candidates are required to have:

- Ph.D. in Immunology or Molecular Immunology.
- Expertise and/or practical knowledge in receptor-ligand interactions, signal transduction and molecular immunoregulation.
- A strong publication record.
- Excellent oral and written communication skills.
- Ability to interact with a multidisciplinary research team.

We offer excellent compensation and benefits as well as an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: Robert F. Obst, Manager, Personnel Relations, R0125, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. In response please refer to the above reference number. We are an equal opportunity employer, M/F/H/V.

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A SmithKline Beckman Company



## POSITIONS OPEN

(Anticipated) **POSTDOCTORAL POSITION** available 1 August 1988 for studies on the control of ion transport in freshwater mussels. Experience in enzyme assays, use of isotopes and/or separation techniques (HPLC) preferred. Send curriculum vitae and three letters of recommendation by 15 April 1988 to: **Dr. T. Dietz, Department of Zoology and Physiology, Louisiana State University (LSU), Baton Rouge, LA 70803-1725.** *LSU is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITION HUMAN TUMOR IMMUNOLOGY

A position is available 1 September 1988 to study the regulation of anti-tumor immune responses in patients receiving immunotherapy for melanoma. Applicants should have Ph.D. or M.D. with experience in cellular immunology. Send curriculum vitae and references to: **Dr. David Berd, Thomas Jefferson University, 1015 Walnut Street, Suite 1005, Philadelphia, PA 19107.**

### POSTDOCTORAL POSITION IN AIDS IMMUNOLOGY

Position available now to study mechanism of cellular immunity to HIV. Our laboratory is utilizing human T cell clones and HIV envelope and core peptides to define T cell-dependent epitopes of the virus. An active multidisciplinary program with biochemists, molecular biologists and clinicians is available. Please send curriculum vitae and names of three references to: **Daniel Stites, M.D., Box 0100, University of California, San Francisco, CA 94143.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to carry on genetic engineering of and to study regulation of gene for histidine decarboxylase from *Lactobacillus*. Background in microbial genetics is desirable. Send curriculum vitae, short résumé of laboratory experience, and names of three references to: **Jon Robertus, Department of Chemistry, University of Texas, Austin, TX 78712.** Telephone: 512-471-3175.

**POSTDOCTORAL POSITION** available immediately for project involving molecular mechanisms of chemical carcinogenesis, including detection of oncogenes and growth factors in preneoplastic and neoplastic oral mucosa. Experience with cell culture and immunocytochemistry desirable. Send curriculum vitae with names of three references to: **Dr. Dennis Solt, Northwestern University, Department of Pathology, 303 East Chicago Avenue, Chicago, IL 60611.**

**POSTDOCTORAL POSITIONS** available in Departments of Anatomy, Biochemistry, Microbiology and Immunology, Pharmacology, and Physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1988 to 1989. Closing date: 1 October 1988, or until positions are filled.

Send applications to appropriate department head: **University of Arizona, Arizona Health Sciences Center, Tucson, AZ 85724.** *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

**POSTDOCTORAL POSITIONS** available immediately for biochemists, biophysicists, and molecular biologists to study (i) the mechanism and regulation of gene expression in both prokaryotic and eukaryotic systems, and (ii) the nucleic acid-protein interactions. Send résumé and three letters of recommendation to: **Professor Cheng-Wen Wu, Department of Pharmacological Sciences, SUNY Stony Brook, Stony Brook, NY 11794.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK #52.

**POSTDOCTORAL POSITIONS** are available to study mechanisms of hepatic glutathione metabolism and transport (with **Dr. N. Ballatori**) and molecular mechanisms of metal transport and toxicity (with **Dr. Thomas W. Clarkson**). Experimental models currently in use in our laboratories include plasma membrane vesicles, isolated hepatocytes, and the perfused rat liver. Please send curriculum vitae, reprints, and names of three references to: **Dr. Thomas W. Clarkson, Environmental Health Sciences Center, University of Rochester School of Medicine, Rochester, NY 14642.** *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY** to work on the molecular biology of sodium channel isoforms, including cardiac sodium channel. Cloning, expression, structure-function relationships. Applicant should have strong background in recombinant DNA technology. Excellent environment available through strong interdepartmental program in cell physiology including patch-clamp electrophysiology in adjacent labs. Send curriculum vitae and two to three letters of reference to: **Richard B. Rogart, M.D., Ph.D., Department of Medicine, Hospital Box #249, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

**POSTDOCTORAL POSITIONS** available immediately for studies of HIV immunochemistry and immunobiology. Areas of research interests include development of an effective synthetic peptide vaccine (**Dr. Gordon Dreesman**); idiotype-anti-idiotype network, gene cloning, immunoglobulin variable region sequencing, and peptide chemistry (**Dr. Ronald C. Kennedy**); definition of HIV B and T cell epitopes, murine and human monoclonal antibodies and human T cell cloning (**Dr. Tran C. Chanh**); and simian immunodeficiency virus (**Dr. Jonathan S. Allan**). Annual salaries range from \$20,500 to \$23,920, dependent upon experience. Please mail curriculum vitae with names and telephone numbers of three references to: **Personnel Director, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

### POSTDOCTORAL POSITIONS DRUG TARGETING RESEARCH PROGRAM UNIVERSITY OF SOUTHERN CALIFORNIA

Positions available immediately for recent Ph.D.'s in biomedical or pharmaceutical sciences to participate in multidisciplinary research projects emphasizing biological, biochemical, and pharmacokinetic aspects of targeted drug delivery. Current research projects include: (1) **Dr. James D. Adams**, "Mechanisms of induction of Parkinson's disease by MPTP"; (2) **Dr. Kenneth Chan**, "Pharmacokinetics of metabolic activation of drugs using stable isotope methodology"; (3) **Dr. Karl Hwang**, "Drug targeting to hepatocytes and macrophage activation by MDP"; (4) **Dr. Robert Koda**, "Transdermal drug delivery and drug disposition"; (5) **Dr. Vincent H. L. Lee**, "Drug targeting to the eye and mucosal peptide delivery"; and (6) **Dr. Wei-Chiang Shen**, "Endocytosis, transcytosis, and intracellular processing of drug conjugates". Interested persons should send curriculum vitae to the appropriate faculty member at: **University of Southern California, School of Pharmacy, John Stauffer Pharmaceutical Sciences Center, 1985 Zonal Avenue, Los Angeles, CA 90033.** *Equal Opportunity Employer M/F.*

### SAINSBURY LABORATORY MOLECULAR PATHOLOGY OF PLANTS POSTDOCTORAL AND RESEARCH ASSISTANT POSTS

The Sainsbury Laboratory, which is being established at the John Innes Institute, Norwich, will undertake basic research with the eventual aim of developing disease-resistant crop plants. It has been set up with a grant of £15 million from David Sainsbury through his Gatsby Charitable Foundation.

Applications are invited for postdoctoral and research assistant positions to investigate various aspects of the interactions between plant viruses and their hosts. The qualifications are an enthusiasm for a molecular approach and talent for laboratory work.

Some positions will be available in the summer/autumn of 1988 and it is expected that further recruitment will be in the summer of 1989 when the new laboratory building will be complete. Further details can be obtained from: **Dr. David Baulcombe, IPSR Cambridge Laboratory, Maris Lane, Trumpington, Cambridge.**

Salaries will be in the range £9,865 to £15,720 for the postdoctoral positions and £8,675 to £11,680 for the research assistant posts. Contributory superannuation.

Applications should be sent to: **The Personnel Officer, John Innes Institute, Colney Lane, Norwich, England, NR4 7UH** including full curriculum vitae and the names of two referees. Please quote reference SL/B.

## POSITIONS OPEN

### POSTDOCTORAL POSITION YEAST MOLECULAR BIOLOGY

A position is available to join a laboratory investigating mechanisms of gene expression in *Saccharomyces cerevisiae*. Applicants should have a recent Ph.D. in molecular biology, biochemistry, or genetics. Send curriculum vitae and names and addresses of three references to: **Dr. Lawrence W. Bergman, Clippinger Laboratories, Department of Chemistry, Ohio University, Athens, OH 45701.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS IN SYNTHETIC ORGANIC CHEMISTRY AND BIOCHEMISTRY (THREE).** Synthesis of carbocyclic and heterocyclic compounds for carcinogenesis studies; in vitro and in vivo metabolism studies of drugs and environmental carcinogens; <sup>32</sup>P-postlabeling of modified DNA adducts. Send curriculum vitae and names of three references to: **Dr. Edmond J. LaVoie, Department of Pharmaceutical Chemistry College of Pharmacy, Rutgers University, PO Box 789, Piscataway, NJ 08855.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS** available to study: (1) structure and function of the receptor for tumor necrosis factor and (2) the cellular and molecular biology of actions mediated by tumor necrosis factor in normal and transformed cells. Recent Ph.D. with training in protein purification, cellular, or molecular biology preferred. Send curriculum vitae and names, and telephone numbers of three references to: **Dr. David B. Donner, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

### POSTDOCTORAL/RESEARCH ASSOCIATE POSITION

Postdoctoral/research associate position is available to study the structure and function of dynein and other flagellar ATPases. Experience in rapid-freeze/deep etch or immuno EM, cDNA cloning, in vitro translocation of microtubules using video-enhanced DIC, protein phosphorylation, amino acid sequencing, or selection and analysis of *Chlamydomonas* mutants is desirable. The Worcester Foundation offers excellent facilities, a stimulating atmosphere, and the opportunity to carry out research unencumbered by teaching or administrative duties. Starting date negotiable; salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. George B. Witman, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

**POSTDOCTORAL OR RESEARCH ASSOCIATE**, Yale School of Medicine. Position available for Ph.D. to study neural plasticity and regeneration, neuroglial interactions, cellular recognition in CNS/PNS, or myelination. Incumbent will join multi-disciplinary research group (morphology, immunology, physiology, pharmacology) in new research center. Background in neural transplantation, immunocytochemistry, ultrastructure or freeze-fracture desirable. Send curriculum vitae and names of three references to: **Stephen G. Waxman, M.D., Ph.D., Chairman, Department of Neurology, Yale School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE**, Ph.D. or M.D. to work on cell and molecular biology of hormone receptors. Special emphasis is on the regulation of the glucocorticoid receptor in tumor cells and culture. Send curriculum vitae and names of three references to: **Gerald Litwack, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately for studies of neurodevelopmental mutants in *Drosophila*. We are particularly interested in mutants that affect neuronal determination and selective connectivity in the adult nervous system. Genetic and/or molecular genetic experience is desirable. Salary commensurate with experience. Please send curriculum vitae and names of three references to: **Dr. Flora Katz, Howard Hughes Medical Institute, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050.**

## POSITION AVAILABLE IMMUNOLOGIST

The International Laboratory for Research on Animal Diseases (ILRAD), is an internationally funded, major institution with the mandate of developing improved methods to control two important diseases of livestock, trypanosomiasis and theileriosis. The multidisciplinary research program includes biochemistry, molecular biology, immunology, cell biology, pathology, parasitology, electron microscopy and entomology with appropriate supporting units. Applications are invited for the position of:

### IMMUNOLOGIST— POSITION REF: PD/6/88/1

A postdoctoral position is available in a multidisciplinary research group studying cellular immune responses of cattle to the protozoan parasite *Theileria parva*. The successful candidate will investigate helper T cell responses specific for parasitised cells, with the aim of identifying parasite antigens important in protective immunity.

Applicants will have a PhD in immunology and relevant experience of the analysis of cell-mediated immune mechanisms. An initial veterinary qualification and/or experience in ruminant immunology will be advantageous.

This is an International staff position and salary will be paid in US dollars. Initial salary will be determined by qualifications and experience. Scientific staff are expected to contribute to the training program. Moving, housing, commutation and education allowances are paid and there are medical and retirement benefits. Applicants should include current curriculum vitae and names and addresses of three referees. Applications, citing the position reference number, should be sent by April 15th, 1988 to:

The Chief Personnel Officer  
ILRAD  
P.O. Box 30709  
NAIROBI  
Kenya

## MOLECULAR BIOLOGIST, IMMUNOLOGIST, VIROLOGIST

The Acquired Immunodeficiency Syndrome (AIDS) Program of the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health is seeking a MOLECULAR BIOLOGIST, IMMUNOLOGIST, and RETROVIROLOGIST to join the Targeted Drug Discovery Section of the Development Therapeutics Branch. The Branch is responsible for planning and directing a federal program of extramural research projects for the discovery and preclinical development of potential therapies for the treatment of AIDS and its associated opportunistic infections. Major efforts presently underway include government-industry-academia cooperative drug discovery groups, animal models for evaluation of immunomodulators, basic biochemical, immunological and virological research directed toward targeted drug discovery, information exchange, data coordination, and planning of new initiatives. A Ph.D. in molecular biology, immunology, virology, or another related discipline is required. Research experience in mammalian and/or prokaryotic expression systems, biological response modifiers, or retrovirology is desirable but not required. Experience with HIV or simian immunodeficiency virus (SIV) would be helpful. Salary range for these positions is \$39,501 - \$60,683.

U.S. citizenship is required. Send curriculum vitae, bibliography and names of references to Dr. Margaret I. Johnston, NIAID/AIDS Program, Room 245p, 6003 Executive Boulevard, Bethesda, Maryland 20892.

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## Join a World leader in drug delivery and make a difference

ALZA's innovative drug delivery systems make a real difference in people's lives. Here's how you can be part of the team.

### Research Scientist – Biological Sciences

A Research Scientist is required to participate in and coordinate a research program on the mechanisms and prevention of irritation in epidermal and mucosal tissues. Candidates should have expertise in microvascular physiology and/or the pharmacology of irritation. Experience in electrophysiology would also be desirable. The position requires a Ph.D. in an appropriate biological science together with significant postdoctoral experience.

### Staff Scientist – Toxicology

A Staff Scientist is needed to ensure compliance with GLP regulations and to direct toxicology studies investigating issues of biocompatibility and tissue irritation. The position requires a Ph.D. or equivalent in an appropriate biological science with subsequent experience in experimental pathology, histology or surgery.

Please send your resume, indicating area of interest to ALZA Corporation, Employment Department, 950 Page Mill Road, P.O. Box 10950, Palo Alto, CA 94303-0802. We are an equal opportunity employer.

alza

## NEUROSCIENTIST PH.D. LEVEL PHARMACEUTICAL RESEARCH

Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has an immediate opening for a scientist to join the Neuroscience Section within our Pharmacology Department. The selected candidate will have interest in neurotrophic influences on regeneration and degeneration in the mammalian nervous system and will join a group work focusing on development of agents to treat neurodegenerative disorders such as Alzheimer's Disease.

Successful applicants will possess the following:

- A Ph.D. in a neuroscience-related discipline
- Experience in studying the biological actions of neurotrophic agents using tissue culture or molecular biological approaches
- Excellent oral and written communication skills, as well as a documented record of research excellence

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested, qualified candidates should forward curriculum vitae and salary requirements to: Ms. S. Hultquist, Warner-Lambert/Parke-Davis, 2800 Plymouth Road, Ann Arbor MI 48105.

"EQUAL OPPORTUNITY IN ACTION"

**PARKE-DAVIS**

DIVISION OF WARNER-LAMBERT COMPANY

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN PROTEIN ENGINEERING/FOLDING** available June, 1988. Molecular genetic techniques are used to introduce specific changes in protein primary structure. Mutation-induced changes in tertiary structure, internal dynamics, function, and the process of structure formation—protein folding are evaluated with biophysical methods.

Applicants with interest in molecular genetic or biophysical aspects of the project are encouraged to apply. Please submit curriculum vitae including names and addresses of three references to: **Dr. Barry T. Nall, Biochemistry, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7760.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study the molecular biology of membrane proteins and their role in parasite attachment. Current ongoing projects include the investigation of the role of sialoglycoproteins as malarial parasite receptors and gene expression of glycoprotein during development. Experience in either molecular biology or in parasitology is desirable. Annual salary offers \$18,000 to \$24,000 commensurate with experience. Submit curriculum vitae and two references to: **Dr. Donella J. Wilson, Division of Biomedical Sciences, Meharry Medical College, 1005 D.B. Todd Boulevard, Nashville, TN 37208. Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH POSITIONS** available immediately to study molecular aspects of hormone action and aging. Opportunity to participate in collaborative research between the Division of Molecular Genetics of the OB/GYN Department, and the Department of Cellular and Structural Biology. Excellent research facilities including the transgenic core. Experience in any one of the following areas is required: molecular cloning, DNA sequencing, mammalian transfection, steroid receptor analysis and enzyme purification. Send curriculum vitae with names of three references to: **Arun K. Roy, Ph.D., Professor and Head, Division of Molecular Genetics, Department of Obstetrics and Gynecology, University of Texas Health Science Center, San Antonio, TX 78284.**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**POSTDOCTORAL/RESEARCH ASSOCIATES IN PROTEIN BIOCHEMISTRY.** Positions available for 3-year, federally funded study on hormonally regulated proteins. Research involves purification, peptide mapping, sequencing, analysis of posttranslational modification, etc. \$18,000 to \$24,000 per year commensurate with experience. Submit curriculum vitae and names, addresses, and telephone numbers of three references to: **Box 41, SCIENCE.**

**POSTDOCTORAL RESEARCH OR RESEARCH ASSOCIATE POSITION** available on 1 July 1988 in an ongoing research program studying metabolic responses of plants to interacting stresses, including air pollution. Individuals should have primary training in plant biochemistry and/or plant molecular biology, with secondary training in plant physiology, agronomy, or other plant science. Send curriculum vitae and names of three references to: **Leonard H. Weinstein, Program Director for Environmental Biology, Boyce Thompson Institute at Cornell University, Tower Road, Ithaca, NY 14853.**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH POSITION** anticipated for Ph.D. neuroscientist to join multidisciplinary basal ganglia research laboratory in the Department of Neurology, Hahnemann University School of Medicine in Philadelphia. Position involves participation in neurochemical, behavioral, and electrophysiological studies of experimentally induced parkinsonism and recovery of function following brain damage. Applicant with neurochemistry or electrophysiology background and willingness to learn other techniques preferred. Position open beginning 1 July 1988. Send curriculum vitae, summary of research experience, outline of research/career objectives, and three letters of reference to: **Dr. J. S. Schneider, Department of Neurology, UCLA School of Medicine, Reed Neurological Research Center, Los Angeles, CA 90024.**

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

## POSITIONS OPEN

**RESEARCH ASSISTANT, Ph.D.** to study molecular mechanisms of B cell development and genetics of differentiation. Experience in molecular genetics, recombinant DNA technology, primary tissue explantation and long-term tissue culture, preparation of dendritic cells and helper T cells, and a working knowledge of immunology, bacteriology and virology required. Qualified persons contact: **Johanna A. Griffin, Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL 35294.**

**RESEARCH ASSISTANT PROFESSOR,** Department of Medicine, Ph.D. in physiology or pharmacology with postdoctoral fellowship in renal physiology and/or experimental hypertension. Knowledge of radioimmunoassay, chromatography, receptor assays desired. Will develop/direct experimental animal laboratory. Send curriculum vitae and three references to: **John Bauer, M.D., Professor of Medicine, University of Missouri-Columbia, Columbia, MO 65212. An Affirmative Action/Equal Opportunity Employer.**

## RESEARCH ASSOCIATE DEVELOPMENTAL CENTER FOR HANDICAPPED PERSONS

This position will study immune function and autoimmune mechanisms in patients with autism and their family members. Opportunity exists for eventual appointment to a professorial rank in appropriate academic department. Earned doctorate in immunology, 2 years of relevant postdoctoral experience, and demonstrated experience in performing immunologic techniques such as tritiated-thymidine incorporation, chromium release and cell separation (a knowledge of flow cytometry techniques is desirable but not required). Salary range for 12-month position is \$25,000 to \$30,000, depending on experience and qualifications. To apply, send letter of application, curriculum vitae, and names of three references or letters of recommendation to: **Dr. Reed Warren, Developmental Center for Handicapped Persons, Utah State University (USU), Logan, UT 84322-6895. Review of applications will begin 8 April 1988.**

*USU is an Affirmative Action/Equal Opportunity and Immigration Reform and Control Act Employer.*

# POSTDOCTORAL POSITIONS

**H**offmann-La Roche, a research-intensive pharmaceutical company located in suburban New Jersey, 12 miles from New York City, is seeking Research Associates (postdoctoral fellows) with expertise in virology and immunology to join multidisciplinary teams of cell biologists, molecular biologists, medicinal chemists, protein biochemists and physical chemists. These positions will offer the successful candidates an opportunity to carry out basic research while interacting with colleagues skilled in translating relevant events into therapeutic approaches. Publication of basic research results is encouraged.

## VIROLOGY

Two positions are available for individuals to carry out AIDS research. We are seeking a **Molecular Virologist** to study mechanisms of action of the **tat** and **art** regulatory proteins of human immunodeficiency virus. A molecular biology background is essential and experience in the area of regulation of gene expression is desirable. The second position is for a **Molecular Biologist/Biochemist** to investigate structure/function relationships of HIV-encoded enzymes by site-directed mutagenesis. Experience in molecular biology or protein chemistry is required.

## IMMUNOLOGY

Two positions are available for **Cellular Immunologists** to investigate (1) mechanisms involved in macrophage recognition and cytotoxicity of tumor cells, and (2) the regulation of cytolytic lymphocyte responses by cytokines, using both in vitro and in vivo models. Candidates should have a PhD in immunology with a strong background in biochemistry or cell biology.

Interested individuals should send curriculum vitae and names of three references to: **Dr. Michael Sherman, Director of Cell Biology, Roche Research Center, Nutley, New Jersey 07110.** We are an equal opportunity employer.



**Hoffmann-La Roche**

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# ENGINEERS

Collier County, in beautiful Naples, FL, has career opportunities available for Engineering professionals in several specialty areas: Transportation, Water Management, Utilities and Environmental. Bachelor's degree with 2-4 years experience required; Florida PE preferred. Challenging positions available due to exciting One Stop Community Permitting Process. Salary to low 40's with excellent fringe benefits.

For further information and application, please call Human Resources COLLECT at (813) 774-8465, or send resume and salary history to:

## COLLIER COUNTY GOVERNMENT

Human Resources Dept.-E

3301 E. Tamiami Trail

Naples, FL 33962

Targeted Screening Date 5-1-88

Equal Opportunity Employer



## POLLUTANT TRANSPORT AND REACTIONS IN SOILS OR INDOOR ATMOSPHERES

The Lawrence Berkeley Laboratory's Indoor Environment Program is seeking outstanding candidates for two positions devoted to performing research on the behavior of organic chemicals or of radon and its decay products inside buildings or in the ground near building foundations. A Ph.D. or equivalent degree in chemistry, physics, geology, environmental engineering, or related fields is required, with substantial experimental or theoretical capabilities applicable to investigation of fundamental transport and reaction processes and their dependence on environmental and physical factors, either in or around homes and other buildings. Processes of interest include interactions of specific pollutants with other substances and with interior surfaces or soils, as well as transport by convection or diffusion either in soil, into buildings or within them.

**DIVISIONAL FELLOW (C/4580)** — Requires 2-5 years' experience, in addition to the Ph.D. and strong evidence of exceptional research and leadership capabilities. Appointment is for a 5-year term with the intention of subsequent promotion to the position of Senior Scientist. The Fellow will initially perform research in existing areas, with the expectation of developing new efforts, in either case undertaking a substantial and growing leadership role. Position requires capabilities and interest in conducting fundamental and outstanding research in an essentially interdisciplinary field, the ability to work well with and stimulate others, and a proven record of effective communication and publication.

**POSTDOCTORAL FELLOW (C/4572)** — Available for an individual who has recently completed the Ph.D. and demonstrated a strong capability for productive research in areas related to those of the program. Position is for one year, normally renewable for a second year.

Competitive salary commensurate with experience, plus comprehensive benefits. Please send resume, including publication list, names of references (**must indicate Job C/4580 or C/4572**) to: Employment Office, Lawrence Berkeley Laboratory, 90-1012, 1 Cyclotron Road, Berkeley, CA 94720 (415)486-4226. An Equal Opportunity Employer, M/F/H.



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LABORATORY

## RESEARCH SCIENTIST Receptor Pharmacology

G.D. Searle, a worldwide leader in the pharmaceutical industry, now seeks a Ph.D. Scientist to design and conduct studies on drug receptor interactions, and receptor isolation and characterization.

Position also requires development of laboratory and program-related objectives in the Molecular & Cell Biology group, and interactions with appropriate molecular biology staff regarding purification and cloning of receptor molecules. Ph.D. in biological science (Pharmacology preferred) or equivalent work experience required, along with at least 3-5 years in drug/receptor interactions. The preferred candidate will also have formal training in receptor pharmacology and receptor isolation.

We offer an attractive salary plus comprehensive benefits. For confidential consideration, please send your resume with salary history to: **G.D. Searle & Co., Dept. HY4, 4901 Searle Parkway, Skokie, IL 60077.** Equal Opportunity Employer M/F/H/V.

**SEARLE**

## RESEARCH SCIENTISTS

Candidates should have a recent Ph.D. in Pharmacology, Biochemistry, Cell Biology or related field with 1-3 years relevant postdoctoral experience. Our laboratory is currently involved in the search for new chemotherapeutic strategies for the treatment of malaria. We pioneered work in the area of inhibition of polyamine biosynthesis for the treatment of parasitic diseases. We are also interested in research in the areas of nucleoside/nucleotide metabolism cytoadherence, membrane biochemistry and glycoprotein biosynthesis. This is an opportunity to work on basic research problems in an exciting, goal oriented environment. Work includes cell culture, enzymology, HPLC and other basic biochemical/pharmacological techniques.

We offer excellent compensation, comprehensive benefits, and relocation assistance. Please send your curriculum vitae with bibliography, salary expectations, and names of three references in confidence to:

**Job Code AJB  
Personnel Services Manager**

**Merrell Dow**

**MERRELL DOW  
RESEARCH INSTITUTE**  
2110 E. Galbraith Road  
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*U.S. Citizenship or Permanent Visa Required  
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## WALTHER ONCOLOGY CENTER FACULTY AND POSTDOCTORAL POSITIONS MOLECULAR BIOLOGY

**THE WALTHER ONCOLOGY CENTER** at the **INDIANA UNIVERSITY SCHOOL OF MEDICINE**, is seeking motivated and productive candidates to pursue original basic research in the areas of:

Gene transfer (transfection, retroviral infection, transgenic mice), gene cloning, regulation of gene expression (including oncogenes), especially as they relate to growth and differentiation factors and their receptors, and genetic mechanisms of multi-drug resistance to chemotherapeutic agents.

Faculty (tenure- and non-tenure-track) and post-doctoral positions are available for candidates with PhD, MD and MD/PhD degrees. Primary appointments will be in clinical and/or basic science departments within the Medical School. Laboratory space will be in the new Clinical Research Building.

Interested candidates should send their C.V., publication list, research goals and the names and addresses of at least three references to:

**Hal E. Broxmeyer, PhD**  
**Professor of Medicine,**  
**Microbiology and Immunology**  
**Scientific Director, The Walther Oncology Center**  
**Indiana University School of Medicine**  
**Clinical Building, Rm 379**  
**541 Clinical Drive**  
**Indianapolis, Indiana 46223**

*Indiana University is an Affirmative Action/Equal Opportunity Employer*

## RESEARCH SCIENTISTS

**Integrated DNA Technologies, Inc.** is seeking qualified scientists to conduct research in exciting new areas of clinical diagnostics and therapeutics. These positions will provide an opportunity for original research and leadership within a growing organization.

All positions require a Ph.D. degree; relevant postdoctoral or industrial experience would be desirable.

**MOLECULAR BIOLOGIST:** Experience in recombinant DNA technology and DNA probe hybridization systems, with some background in clinical or diagnostic microbiology.

**VIROLOGIST:** Experience in clinically relevant virology, recombinant DNA technology, and tissue culture; for research on antiviral therapeutics.

**MOLECULAR GENETICIST:** Experience in molecular biology and DNA hybridization technology as related to cancer/oncology or genetic disorders.

**BIOORGANIC CHEMIST:** Experience in nucleic acid, nucleoside or backbone modification, and affinity/solid support chemistry.

In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance. IDT is located in an attractive midwestern community and is in close proximity to a major university and medical school complex. Please send a resume and description of research experience to: **Personnel, Integrated DNA Technologies, Inc., Tech Innovation Center, Oakdale Campus, Iowa City, IA 52242.**

IDT

INTEGRATED  
DNA  
TECHNOLOGIES, INC.

## Scientist Drug Metabolism

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking an experienced scientist with a background in protein chemistry or protein biochemistry for its Drug Metabolism Unit located in suburban Philadelphia.

The successful candidate will:

- apply multidisciplinary techniques to study disposition of therapeutic proteins to support drug development and discovery.
- study protein and protein-ligand interactions involving specific disposition process.
- study the intrinsic and extrinsic factors governing the pharmacokinetics and metabolism of proteins of therapeutic interest.
- Plan and develop analytical approach as needed to conduct these studies.

Candidates are required to have:

- Ph.D. in protein chemistry or protein biochemistry or related areas with strong background in protein chemistry.
- experience in bioanalytical methods development required; e.g., immunoassays, HPLC and enzymatic assays.
- experience in modifying protein/peptide molecules with specific properties.
- familiarity with general analytical tools applicable in protein biochemistry required; e.g., electrophoresis/isoelectrofocusing, immunoblotting, protein column chromatography, etc.
- knowledge in enzyme kinetics.
- demonstrated ability to integrate and apply multidisciplinary approaches in research problems.
- knowledge in drug metabolism and pharmacokinetics preferred.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential review, please forward your C.V. and names of three references to: Marianne J. Shandy, Manager, Personnel Relations, J0003, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

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## SENIOR SCIENTISTS - MOLECULAR BIOLOGY

**THE LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS**, the research division of the National Library of Medicine located at the National Institutes of Health in Bethesda, Maryland, is seeking qualified individuals for a Senior Scientist position in its Biotechnology Information program. The candidate is expected to establish and conduct a research program in molecular biology computing which may include, but is not limited to, prediction of structural or biological function from sequence data, comparative analyses of physical and genetic maps, pattern recognition in sequence data, or evolution of gene sequences. Computing facilities include twenty Sun workstations and servers, DEC Vax 11/780s, IBM mainframes, a network link to a Cray S-MP at the National Cancer Institute, and direct Arpanet access. Programming staff support is also available.

Applicants must have a Ph.D. in molecular biology or a related field and a publication record in the above research areas. Appointment is for a one- to two-year period, extendable to four years. Salary range is \$40,000 to \$65,000 depending upon experience.

Send curriculum vitae and the names of three references to:

Dennis Benson, Ph.D.  
Lister Hill National Center for  
Biomedical Communications  
National Library of Medicine  
National Institutes of Health, Public Health Service  
8600 Rockville Pike, Bethesda, MD 20894

For further information call:  
Ms. Yvonne Reid (301) 496-4441  
NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## CELL BIOLOGY OPPORTUNITIES MARKETING • R&D

*Molecular biology, tissue culture, cell biology and immunology — all are areas of interest in our expanding circle of science. Formed in 1983 from a merger of Bethesda Research Laboratories (BRL) and the GIBCO Laboratories Division of the Dexter Corporation, Life Technologies is a preeminent and innovative leader in the expanding life sciences research community, the bioprocessing marketing, and the biotechnology industry.*

We have now made a major commitment to expand our product offering in cellular biology. We are looking for the following managers with industry experience and a working knowledge of cell growth factors, hormones and receptors, membrane reagents, oncoprotein reagents, second messenger and related reagents.

### MARKETING MANAGER

Create strategic plan and forecast for Cell Biology business. Initially serve as Marketing Manager AND Product Manager until business supports additional staff. A record of success with 3+ years relevant marketing and/or product management experience required. MBA preferred.

### DIRECTOR, CELL BIOLOGY R&D

Organize, staff and manage R&D function with capacity to propose, design and develop new products or improve existing products. We seek a Ph.D. with post doctoral training. Business experience with exposure to Sales/Marketing, Operations and other business functions essential.

Interested candidates should send resume, in confidence, to:

Director of Human Resources  
Life Technologies, Inc.  
8717 Grovemont Circle  
P. O. Box 6009  
Gaithersburg, MD 20877  
An equal opportunity employer, M/F/V/H

## Research Opportunities

The Plant Molecular Biology Group of Monsanto Company is seeking outstanding scientists to expand our research efforts in several areas of plant biology. Positions are available for:

**Senior Scientist** with a Ph.D. in Molecular Biology, Biochemistry or Plant Pathology, and a significant record of accomplishment. Post Doctoral experience is desirable.

**Research Assistants and Associates** with a BS or MS in Biochemistry, Molecular Biology or related fields. Experience in protein purification, gene isolation or plant tissue culture is especially desired.

**Post Doctoral Research Associates** in Molecular Biology, Biochemistry, Virology, Plant Pathology or Plant Tissue Culture/Transformation.

Monsanto offers an excellent salary and benefits package and stimulating work environment. Please send your curriculum vitae, a summary of your research interests, and 3 letters of reference to: **MONSANTO COMPANY; John Bussen; Department BB5BO-AG; 700 Chesterfield Village Parkway; St. Louis, MO 63198.** Equal Opportunity Employer M/F/H/V.

# Monsanto

## Senior Scientist

Geneticist/Cell Biologist, Ph.D., postdoctoral experience preferred, to join our effort in producing improved crop plants. Candidate should be a well-trained plant biologist with an interest in the problems of agriculture and the ability to contribute to the solution of these problems. Background in agricultural aspects of plant science desirable, as is experience with plant cell and tissue culture, transformation, and the analysis of transgenic plants.

Zoecon Research Institute has been a leader in innovative agricultural research for more than 15 years. The institute has established research programs in herbicide design, plant biotechnology, insect physiology/biochemistry and chemistry. Research in plant biotechnology supports the plant breeding efforts at Northrup King Seeds, Rogers Brothers Seeds, and other Sandoz seed companies. Our research environment encourages interaction with other scientists throughout the world.

To apply for the position, please send a letter describing your interests, a curriculum vitae and the names of three references to:

### SANDOZ CROP PROTECTION CORPORATION

Zoecon Research Institute  
Human Resources Department  
975 California Avenue  
Palo Alto, CA 94304

AA/EOE



## PROJECT MANAGER

If you're interested in a career with a leading health care company, why not begin your search with a company respected the world-over for its profound commitment to care, to quality, and to innovation? Baxter Healthcare Corporation has demonstrated that commitment for over 30 years.

Currently, our Baxter Hyland Division is seeking a qualified individual to plan and implement programs to improve quality and yield of blood-derived therapeutic proteins; coordinate and implement projects from inception to completion; conduct feasibility studies; organize scale-up activities; and provide support for transfer of technology into production. A technical degree or equivalent experience (Ph.D. in Protein Chemistry or an M.S. with 7+ years protein purification experience desirable); strong supervisory, communication, and project organization experience; and knowledge of standard lab equipment, production equipment and statistical procedures required.

Baxter offers a fast-paced, stimulating work environment, attractive benefit and compensation plans, and the opportunity to work for a world-class leader in the health care industry. For consideration, please send a current resume with salary history to: **Ms. Vickie Thrasher, Baxter Hyland Division, 4501 W. Colorado Blvd., Los Angeles, CA 90039.** PRINCIPALS ONLY, PLEASE. Equal Opportunity Employer.

Hyland Division

# Baxter

## POSITIONS OPEN

### RESEARCH ASSOCIATE

Full-time position available 1 April 1988 for scientist with Ph.D. or M.S., and research experience in electron microscopy to study mechanisms of myelin degeneration in cell culture and to supervise routine operation of laboratory. Contact: **Dr. Francis A. Mithen, Department of Neurology, St. Louis University, 3660 Vista Avenue, St. Louis, MO 63110. Telephone: 314-577-6082.**

### RESEARCH ASSOCIATE

The Center for Laser and Applied Technology, Charlotte Memorial Hospital and Medical Center invites applications for a full-time research associate position. The position will involve research in cardiovascular applications of lasers. Individuals applying should have previous experience in small animal cardiac surgery, cardiac catheterization, cardiopulmonary bypass perfusion of canines, and the use of lasers. A 2- or 4-year degree in a related field is also required.

Interested applicants should submit curriculum vitae and letters of recommendation by 15 April 1988 to:

**George Tatsis**  
**Heineman Medical Research Laboratory**  
**P.O. Box 32861**  
**Charlotte, NC 28232**  
*Equal Opportunity Employer*

Immediate opening. **RESEARCH ASSOCIATE—Ph.D.** with experience in protein purification, HPLC, immunochemical methods, monoclonal antibody, and so forth. Salary \$25,000 to \$30,000. Send résumé to: **Adel A. Yunis, M.D., Department of Medicine (R-38), University of Miami School of Medicine, P.O. Box 016960, Miami, FL 33101.**

*An Equal Opportunity Employment*

### RESEARCH ASSOCIATE POSTDOCTORAL

Position now open to study the role of sperm proteinases involved in mammalian fertilization. Emphasis is on the mechanisms of action and regulation of the proacrosin-acrosin enzyme system. This position will allow for independent research as well as training in an area of interest to the academic, medical and pharmaceutical community. Applicants with interest in cell/molecular biology, biochemical, or immunological aspects of the project are encouraged to apply. Send curriculum vitae, including citizenship status, the names of three references and statements of research experience and career goals to: **Kenneth L. Polakoski, Ph.D., Department of Obstetrics and Gynecology, Washington University, 4911 Barnes Hospital Plaza, St. Louis, MO 63110. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH TECHNICIANS**—Applications are invited for two full-time technicians in aquatic research. One position is available to assist in experimental studies of microalgae and nutrients/herbivores in marine and freshwater ecosystems. A second position is available to assist in studies of nutrient and light effects on freshwater phytoplankton communities. The positions are assured for at least 2 years. Experience with algae and/or aquatic chemistry, and a B.S. degree are preferred. For information, contact: **Dr. JoAnn Burkholder, Department of Botany, Box 7612, North Carolina State University (NCSU), Raleigh, NC 27695. Telephone: 919-737-2726 or 919-737-2727. NCSU is an Affirmative Action/Equal Opportunity Employer.**

**RESEARCH TOXICOLOGIST** with interests in biochemical mechanisms of chemical toxicity and carcinogenicity to lead original research projects. Ph.D. in biochemistry, toxicology, or a related area, and at least 2 years of postdoctoral research experience in drug or chemical carcinogen metabolism required. Experience is required in the detection of DNA adducts using radioactive carcinogens and by <sup>32</sup>P-postlabeling, and synthetic procedures involving radioisotopes, chemical analysis by NMR and mass spectrometry, chromatographic techniques including HPLC and GC, operation of a superconducting NMR spectrometer. Salary \$46,000 per year. Forty hours per week. Contact: **The Job Service at 516 North Mangum Street, Durham, NC 27701, or the Job Service nearest you. Refer to Job Order Number NC 7102163.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE OF MICROBIOLOGY AND IMMUNOLOGY

Research associate: Minimum requirements: Ph.D., M.D., or equivalent, with knowledge of cellular and/or molecular immunology to work on a project concerning the pathogenesis of chronic inflammatory diseases. Annual salary between \$20,000 and \$28,000, depending on experience and qualifications. Send résumé to: **Mr. K. E. Johnson, University of Illinois at Chicago, Department of Microbiology/Immunology, E-703 MSA, 835 South Wolcott, Chicago, IL 60612. The University is an Affirmative Action/Equal Opportunity Employer.**

### MOLECULAR GENETICS/ PATHOLOGY LABORATORY UNIVERSITY OF NORTH CAROLINA CHAPEL HILL, NORTH CAROLINA (Under the direction of Drs. Oliver Smithies and Nobuyo Maeda)

**RESEARCH TECHNICIAN III** to participate in research leading to production of transgenic animals by injection of embryonic stem cells into blastocysts. Overall research is aimed at modifying specific genes in a predictable way with a view to gene therapy and the generation of animal models of human genetic diseases. B.S. in biological science is required. M.S. in biological science and at least 1 year of experience with microinjection and embryo transfer, and in mouse breeding preferred.

This position is open 1 June 1988 at The University of North Carolina at Chapel Hill, but is available immediately if the successful candidate is willing to begin work at the University of Wisconsin at Madison. Starting salary commensurate with background and experience. Salary range: \$19,944 to \$30,264. For an application, contact Ms. Carolyn Van Sant at:

**UNC Employment**  
**CB# 1040, 111 Pettigrew Hall**  
**Chapel Hill, NC 27599-1040**  
**Telephone: 919-962-2991**

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Professional Career Opportunities at our 600+ bed tertiary care affiliate of Cornell University Medical College. **TECHNOLOGIST—MOLECULAR IMMUNOLOGY:** Skilled in molecular biologic techniques and tissue culture work required. Minimum: 3 to 5 years of experience in molecular biology and immunology. **RESEARCH AND ASSISTANT—NEPHROLOGY:** Laboratory or kidney disease and hypertension. Minimum: 1 year of research experience essential, preferably involving RIA and small animal surgery. B.S. degree or equivalent. Comprehensive salary and benefits package. Respond by résumé, or call: **Personnel Department, North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030. Telephone: 516-562-4690. An Equal Opportunity Employer.**

### VISITING ASSISTANT PROFESSOR OF BIOLOGY

Hope College is seeking to fill the position of visiting assistant professor of biology. This appointment will be for a 2-year period, with the possibility of renewal for an additional 2 years. The individual selected for this position will be expected to teach general microbiology, advanced microbiology, and participate in the introductory program for biology majors. The individual will be strongly encouraged to take advantage of the opportunity to participate in one of the ongoing research programs in the department. The Biology faculty has a strong record of activity in externally funded research. A list of research opportunities will be provided upon request.

Hope College is a distinguished Christian co-educational, residential liberal arts college affiliated with the Reformed Church in America. Hope College has maintained a strong tradition in science that involves both teaching and research. *Applications from women and minority persons are particularly encouraged.*

Qualified applicants should arrange to have curriculum vitae, transcripts, a statement of teaching competencies and indication of research orientation, and three letters of recommendation forwarded as soon as possible to:

**Dr. James M. Gentile, Chairman**  
**Biology Department**  
**Hope College**  
**Holland, MI 49423**

Applications will be accepted until this position is filled.

## POSITIONS OPEN

**SCIENCE WRITER**—Manning, Selva & Lee, a major New York City public relations agency producing material for science writers and broadcasters, is currently looking for an experienced (1 to 3 years) science writer to work on a leading pharmaceutical company account. Ph.D. or similar advanced degree required. Candidate must be capable of writing for lay audiences, and should have experience in central nervous system and cardiovascular diseases and diabetes.

Send letter, résumé, and salary history to:

**Manning, Selva & Lee**  
**79 Madison Avenue**  
**Department HR**  
**New York, NY 10016**

### ANIMAL AND PLANT HEALTH INSPECTION SERVICE UNITED STATES DEPARTMENT OF AGRICULTURE

Innovative **SCIENTISTS** with good research writing skills and advanced education or work experience in biotechnology are being recruited for several newly created positions with the Biological Assessment Support Staff, Biotechnology Permit Unit.

This challenging opportunity will involve the technical assessment and evaluation of submissions for release to the environment and transport of genetically engineered organisms. These individuals will guide and develop policy concerning the regulations of these organisms as well as travel throughout the U.S. interacting with the scientific community in the cutting edge of biotechnology.

Successful candidates will have advanced education or work experience in one or more of the following areas: molecular biology, microbiology, molecular genetics or plant breeding and genetics. Salary range starting at \$27,716 to \$43,181 per year. Interested individuals call: **202-382-1364** to request a copy of announcement number W-411A-88 for application requirements.

*USDA is an Equal Opportunity Employer.*

### TUMOR BIOLOGIST

Applications are invited for a tenure-track position at the assistant professor level in the Head and Neck Tumor Biology Program at Eastern Virginia Medical School. The successful candidate will have a joint appointment in the Department of Microbiology/Immunology and Otolaryngology—Head and Neck Surgery. An M.D. and/or Ph.D. and postdoctoral experience are required. Investigators with research interests in molecular and cellular aspects of cancer are encouraged to apply. Applications from individuals with research experience in head and neck oncology, oncogenes, in vivo models, steroid and polypeptide hormones/receptors, and cytogenetics are particularly welcomed. Interested candidates should send their curriculum vitae, a brief description of future research interests, and the names of three references to: **Dr. Kenneth D. Somers, Chairman, Search Committee, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 980, Norfolk, VA 23501.**

### VERTEBRATE PHYSIOLOGIST

Applications are invited for a tenure-track assistant professorship in the Department of Zoology, University of Toronto, beginning 1 July 1988 or thereafter. We are seeking an outstanding and innovative scientist who has recently received his/her Ph.D. degree, but applications from more established investigators will be considered. The successful candidate will be expected to establish a vigorous, independent research program, preferably in environmentally related vertebrate physiology and teach at undergraduate and graduate levels. Salary, currently between \$30,000 and \$51,000 for an assistant professor, will be commensurate with experience and qualifications. By 15 April 1988, applicants should send a current curriculum vitae, a description of their future research plans, and a list of the names and addresses of at least three referees. If they wish, applicants may arrange with their referees to send letters on their behalf. Send materials to:

**Dr. John Machin, Physiologist Search Committee, Department of Zoology, University of Toronto, 25 Harbord Street, Toronto, Ontario M5S 1A1, Canada.**

*In accordance with Canadian Immigration requirements, this advertisement is directed in the first instance to Canadian citizens and landed immigrants. In accordance with the Employment Equity Policy of the University of Toronto, applications are invited from all qualified women and men.*



## DEVELOPMENTAL NEUROBIOLOGY

The Research Institute of the Hospital for Sick Children, one of the largest and most active of its kind in the world, is seeking an outstanding scientist with a Ph.D. or M.D. to carry out basic research and developmental neurobiology as related to Sudden Infant Death Syndrome (SIDS).

The appointee will be expected to collaborate with an established group studying SIDS and will also develop his/her own research program. The appointment will be at a rank equivalent to assistant or associate professor.

Send curriculum vitae, a brief description of research interests and the names of 3 references before April 15, 1988 to: **Dr. Barry T. Smith, The Research Institute.**



555 University Avenue, Toronto, Ontario M5G 1X8

**THE HOSPITAL FOR SICK CHILDREN**

## Postdoctoral Scientist

Genentech, Inc., a leader in the field of biotechnology, is currently seeking a Postdoctoral Scientist. In this position, you will be involved in the development of *in vitro* and *in vivo* cellular and animal models which can be used to predict the efficacy of protein or peptide immunotherapeutics.

Requirements include experience in tissue culture and in the preparation and handling of human blood leukocytes. Experience in the development and use of immunoassays and in animal handling is desirable.

Genentech, Inc. offers an excellent salary and benefits package, coupled with the opportunity to make a significant contribution to our organization. Please send resume to: George Cianciolo, Scientist, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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# RESEARCH SCIENTISTS

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Bio-Rad Laboratories is a worldwide leader in the fields of clinical diagnostics, chemical separations and analytical instrumentation. Our Clinical Diagnostics Division has outstanding opportunities for experienced, goal-oriented research scientists to assume leadership roles in developing diagnostic reagent systems for the 1990s.

### Microbiology

This position requires experience in the isolation, characterization and detection of infectious disease antigens in clinical specimens. An MS/PhD in Microbiology or equivalent experience is required. Dept. #271-0318S.

### Instrumentation Engineering

Five or more years' experience as a senior project engineer coordinating both mechanical and electronic engineering of instruments. Demonstrated ability to work in a multidisciplinary environment. Strong communication skills are required. Dept. #293-0318S.

### Immunoassay Development

These positions require a strong background in the development of commercial immunoassays and an MS or PhD in biological sciences or chemistry. Experience in automated immunoassay is desirable. Good communication, leadership and problem solving skills are essential. Dept. #292-0318S.

### Organic Chemist

The position will work with an interdisciplinary team in the development of novel organic compounds for use in immunoassays. The position requires a PhD in chemistry with a strong background in organic synthesis. Dept. #288-0318S.

### Sr. R&D Chemist

This position will develop and evaluate HPLC methods and instrumentation for drug analysis. An advanced degree in analytical or clinical chemistry is desirable plus experience in chromatography, instrument design, electronics and computers. Dept. #294-0318S.

**Be part of the team in our new facilities overlooking the SF Bay in Hercules, California.**

For consideration, please submit resume, indicating appropriate department, to Bio-Rad Laboratories, Human Resources, 1000 Alfred Nobel Drive, Hercules, CA 94547. EOE.

**BIO-RAD**

Bio-Rad Laboratories

## POSITIONS OPEN

**SECURITY POLICY STUDIES:** The Program on International Peace and Security at Carnegie Mellon University seeks a **POSTDOCTORAL FELLOW** to perform a series of assessments of advanced technologies critical to military modernization. Applicants should have Ph.D. in electrical or computer engineering or physics. Apply to: **Granger Morgan or Benoit Morel, Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA 15213. Telephone: 412-268-2672.**

## VETERINARY PATHOLOGIST

The Laboratory of Biochemical and Genetic Toxicology of the Wadsworth Center for Laboratories and Research invites applications for a position of veterinary pathologist. The candidate must possess a D.V.M. degree or equivalent, and be Board-eligible or certified by the American College of Veterinary Pathologists. The individual is expected to develop a self-selected, independent research program compatible with the broad general interests of the Center, and to conduct service pathology evaluations of a wide range of toxicology and other animal studies. Research collaborations with Wadsworth Center scientists, who are engaged in all aspects of biomedical research, are strongly encouraged. Research time commitment will be approximately 70%, and service time commitment will be 30%. There are also opportunities to teach and recruit graduate students in the recently initiated School of Public Health Sciences, a joint venture between the Wadsworth Center and the State University of New York at Albany. The grade level, academic ranking, and salary will be commensurate with professional experience. Send curriculum vitae and three letters of reference, within 1 month, to: **Dr. Laurence Kaminsky, Wadsworth Center for Laboratories and Research, P.O. Box 509, Albany, NY 12201.**

## AWARDS

The Charles A. Dana Foundation announces that the 3rd annual **CHARLES A. DANA AWARDS FOR PIONEERING ACHIEVEMENTS IN HEALTH AND HIGHER EDUCATION** will be made in November 1988. These awards, which include an honorarium of \$50,000, recognize outstanding contributions in health promotion/disease prevention and, separately, to the improvement of undergraduate education. Nominations must be postmarked by 1 June 1988. For further information, contact: **Joseph P. Wells, The Charles A. Dana Foundation, 150 East 52nd Street, Box S, New York, NY 10022. Telephone: 212-223-4040.**

## GRADUATE PROGRAM

Ph.D. degrees in aquatic ecology, emphasizing the effects of nutrients and light on phytoplankton in North Carolina lakes. Two- and 3-year graduate **RESEARCH ASSISTANTSHIPS** are available to highly qualified students, at \$8,400 to \$10,000 per year. For information, contact: **Dr. JoAnn Burkholder, Department of Botany, Box 7612, North Carolina State University (NCSU), Raleigh, NC 27695. Telephone: 919-737-2726, and Dr. Val Smith, Department of Biology, University of North Carolina (UNC), Chapel Hill, NC 27599. Telephone: 919-962-6930. NCSU and UNC are Affirmative Action/Equal Opportunity Employer.**

## WORKSHOP

### WORKSHOP ON BIOLOGICAL DATA FOR PHARMACOKINETIC MODELING AND RISK ASSESSMENT 23 to 25 MAY 1988

Sponsored by the ILSI Risk Science Institute and the U.S. Environmental Protection Agency, held at Great Smokies Hilton, Asheville, NC. Workshop will provide insights and guidance to risk assessors with respect to the rigor of analysis, focus on making the uncertainties in modeling more explicit, communicate to biologists the value of pharmacokinetic models and the kinds of data needed, and identify research/data needs for use of pharmacokinetic models in risk assessment. The meeting will be limited to approximately 100 participants.

Details and application forms from: **Ms Kate Schalk, Eastern Research Group, 6 Whittemore Street, Arlington, MA 02174. Telephone: 617-648-7810/7809.**

## GRADUATE TRAINING

### GRADUATE TRAINING IN NEUROSCIENCE

The Department of Physiology and Biophysics at Hahnemann University has graduate stipends available to support students pursuing a Ph.D. degree in physiology beginning in September 1988.

The department has particular research strengths in neurophysiology, neuropharmacology, and neuroanatomy. Specific areas include: extrahypothalamic actions of sex steroids (**Sheryl S. Smith**), basal ganglia function (**Jay Schneider**), cerebral cortex function, neural network simulations and alcohol (**John K. Chapin**), and central monoamine systems, epilepsy and drugs of abuse (**Barry D. Waterhouse**).

The program is open to students with a B.S. or M.D. degree. Further information and application forms are available from: **Dr. Joseph Torres, Department of Physiology and Biophysics, M.S. 409, Hahnemann University, Broad and Vine, Philadelphia, PA 19102-1192. Affirmative Action Employer.**

## TRAINING PROGRAM

**REPRODUCTIVE BIOLOGY TRAINING PROGRAM:** Pre- and postdoctoral positions are available at the Oregon Health Sciences University (OHSU) and at the Oregon Primate Research Center that are supported by a NICHD training grant beginning 1 July 1988. Students may enroll in the graduate program through the Departments of Physiology or Cell Biology and Anatomy, OHSU and may participate in interdisciplinary graduate programs in neurobiology, or cell and molecular biology. Eighteen faculty members offer multidisciplinary training in: neuroendocrinology (**C. L. Bethea, V. B. Critchlow, M. J. Kelly, A. J. Lewy, S. R. Ojeda, O. K. Ronnekleiv**); biology of the gonads and reproductive tract (**R. M. Brenner, I. A. Maslar, R. L. Stouffer**); gamete biology and fertilization (**D. D. Hoskins, D. P. Wolf**); pregnancy and fetal development (**J. M. Bissonnette, J. A. Resko**); cellular mechanisms of hormone action (**M. H. Melner, C. E. Roselli**); sexual behavior (**C. H. Phoenix**); and reproductive toxicology (**D. L. Hess**).

Applicants must meet NRSA, U.S. citizenship and residency requirements. Predoctoral candidates can receive information on the graduate program from the address below. Postdoctoral candidates should send a letter of interest, curriculum vitae, and names of three references to: **John A. Resko, Ph.D., Chairman, Department of Physiology, Oregon Health Sciences University, Portland, OR 97201. OHSU is an Equal Opportunity Employer.**

## FELLOWSHIPS

### HARVARD SCHOOL OF PUBLIC HEALTH INTERDISCIPLINARY PROGRAMS IN HEALTH POSTDOCTORAL FELLOWSHIPS



The Program in Environmental Health and Public Policy invites applications from promising graduates of advanced degree programs in the natural or social sciences. The program focuses on the scientific and analytical foundations for environmental decisions. In addition to conducting individual research, fellows are encouraged to collaborate with each other and faculty members on projects of mutual interest. A group project might consider, for example, the effect of scientific uncertainties on environmental decisions.

Fellows will be appointed for a term of 1 year, starting September 1988. Award may be renewed. Application deadline: 15 April 1988. Decisions announced in May.

For information, write to:

**Professor Donald F. Hornig  
Harvard School of Public Health  
665 Huntington Avenue  
Boston, MA 02115  
Telephone: 617-732-1258**

## COURSE

### TOXICOLOGY UPDATE 1988 CURRENT CONCEPTS IN REPRODUCTIVE TOXICOLOGY 6 to 8 JUNE 1988

This course will examine the principles necessary to understand how chemicals interact with the reproductive system and the consequences of such interactions. The lectures will provide a general overview of toxicologic principles and of male and female reproductive physiology. Directors: **M. A. Trush and T. W. Kensler**. For further information contact: **Dr. Jacqueline Corn, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205. Telephone: 301-955-2609.**

## PROGRAM

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 14, 424 Beacon Street, Boston, MA 02115.**

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIP IN CLINICAL LABORATORY IMMUNOLOGY

Applications are invited for a 2-year fellowship in clinical laboratory immunology at North Carolina Memorial Hospital (NCMH) and the University of North Carolina (UNC). Fellowship provides residency-type training in laboratory immunology through laboratory experience, conferences, and research. Send curriculum vitae and three letters of reference before 20 April 1988 to: **Dr. James D. Folds, Ph.D., Director, Clinical Microbiology-Immunology Laboratories, Room 1035 PST, North Carolina Memorial Hospital, Chapel Hill, NC 27514. The UNC/NCMH is an Equal Opportunities/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIPS** (two) at The University of Chicago to conduct research in (a) evolutionary biology and (b) genetics. Both fellows will also provide half-time assistance in the design, coordination and teaching of introductory biology labs. Twelve-month position beginning 1 September 1988, renewable for 1 year. Salary: \$18,000. Submit curriculum vitae, three letters of reference, and a statement which discusses your teaching interests and identifies a University of Chicago faculty sponsor for your proposed research. Applications should be sent before 11 April 1988 to: **Postdoctoral Search Committee, Dr. Rosamond Porter, Biological Sciences Collegiate Division, 940 East 57 Street, Chicago, IL 60637. Equal Opportunity/Affirmative Action Employer.**

## MARKETPLACE

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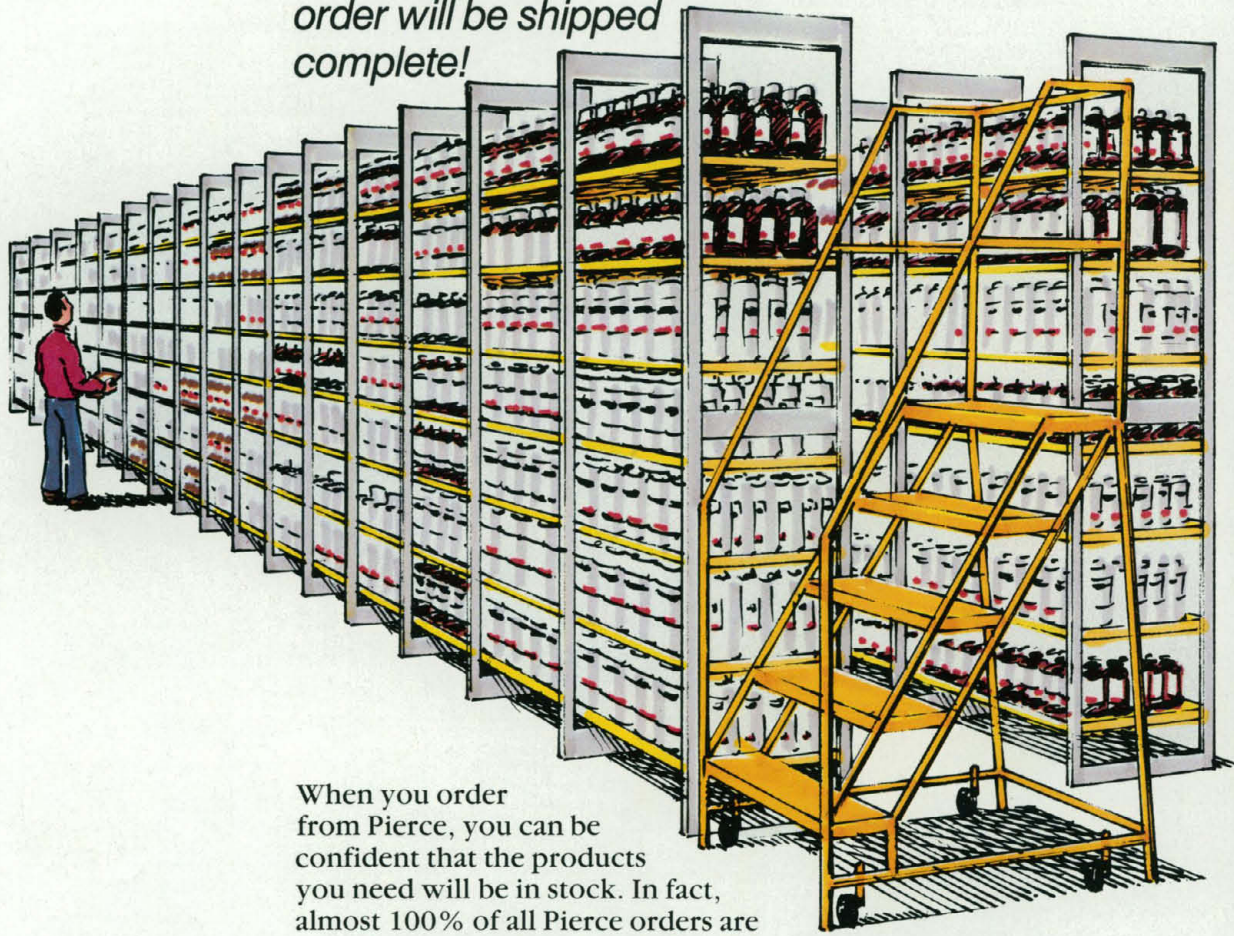


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