

An African Population

African Pygmies. LUIGI LUCA CAVALLI-SFORZA, Ed. Academic Press, Orlando, FL, 1986. xxxiv, 461 pp., illus. \$69.50; paper, \$39.95.

This book presents summaries of findings from almost two decades of collaborative research, principally focusing on the Aka Pygmies of the Central African Republic, but including some comparative material on Pygmies from Cameroon, Zaire, and Rwanda. The editor, a renowned human geneticist now at Stanford Medical School, originated the project in 1966 while at the University of Pavia in Italy and has remained its chief director and guiding spirit. Under his editorship 34 authors from 21 institutions contribute 24 chapters of data and analysis, framed by the editor's own chapters of introduction and conclusion. The research reports are organized in three groups, Demographic and Anthropological Studies (six chapters), Physiological and Medical Data (five chapters), and Genetic Observations (13 chapters). Yet the intellectual thrust of the book is much narrower than even these headings would imply. As the editor acknowledges, the chief goal "was to gain an understanding of the genetic structure of a hunter-gatherer population, in the hope that it might give us some idea of conditions in the Paleolithic." It is the intensity of this focus that is both the strength and the weakness of the book.

African Pygmies are often referred to as the largest extant hunting and gathering group, numbering by some estimates as many as 200,000 and distributed discontinuously across the rainforest belt of tropical Africa from Cameroon to Rwanda. In fact, they are perhaps best referred to as "exchange foragers," since they are everywhere found in a mutualistic relationship with horticulturists, exchanging labor and forest products for manufactured items and garden produce. Among Pygmy groups themselves there is considerable cultural variation in residence patterns, foraging techniques, and degree of acculturation, nor do they speak a common language. Yet their short stature sets them apart from all other groups in central Africa. That and the assumption that their ancestors were the "primordial" inhabitants of the rainforest account for the fascination they hold for students of human biology and evolution.

The papers in this volume present a wealth of detailed, quantitative information on selected aspects of Pygmy biology, all the more impressive given the logistical difficulties presented by the remote field situation. The demographic and anthropometric stud-

ies are limited by the paucity of longitudinal data. This becomes particularly frustrating in the chapter by Van de Koppel and Hewlett on growth, where the important suggestion is made that Pygmy stature is due primarily to an absence of an adolescent growth spurt, a hypothesis that can hardly be tested without longitudinal data. Other chapters demonstrate beautifully how far limited data, if carefully collected, can take you, especially the chapters on exploration and mating ranges by Hewlett, Van de Koppel, and Cavalli-Sforza and on emic death etiology by Hewlett, Van de Koppel, and Van de Koppel. The section on medical data suffers from several inherent difficulties, principally the fact that nutritional analyses depend on data from only a single season of the year when the groups studied are relying most heavily on garden foodstuffs. Merimee and Rimoin review their studies of the endocrinology of Pygmy growth, championing the hypothesis that a specific deficiency of IGF-I is the cause of their short stature. Some question remains, however, concerning the adequacy of the control exercised over nutritional status in these studies.

The largest section of the book, representing the heart of the project as a whole, is devoted to the analysis of genetic polymorphisms, including blood groups, immunoglobulin markers, HLA antigens, hemoglobins and transferins, digestive enzymes, red cell enzymes, transport proteins, and phenotypic variants such as color blindness and dermatoglyphics. The sum of this information supports a few notable conclusions: that Pygmy groups are closer to each other, genetically, than to other African groups; that there has been considerable admixture of non-Pygmy genes in the Pygmies of Cameroon, the Central African Republic, and Rwanda; and that the Pygmies of Zaire's Ituri Forest show the least genetic adulteration. Analysis of the inheritance of height suggests that a very few loci without dominance may control the expression of short stature, while no evidence is found for active selection at any locus other than the expected absence of Hb-S homozygotes.

In his summary chapter Cavalli-Sforza focuses on a few questions: Are there special genetic consequences to be expected from the social demography of Pygmy groups? Can Pygmy stature be understood as a consequence of natural selection for thermal efficiency in a rainforest environment? What is the genetic relationship of Pygmies to other African groups? Yet when the final section returns to the theme of Pygmies as models for Paleolithic humanity I am unavoidably reminded of how narrow an exploration of that theme this book represents. The key question really seems to be whether

Pygmies can be used as a model of Paleolithic population genetics. Unfortunately this is not a central question for most students of hunter-gatherer societies or human ecology, or even, any more, for most students of human evolution. This book may be the best example of an area of research that peaked over a decade ago.

PETER T. ELLISON
*Department of Anthropology,
Harvard University,
Cambridge, MA 02138*

Books Received

Biological and Toxin Weapons Today. Erhard Geissler, Ed. Oxford University Press, New York, 1986. xii, 207 pp., \$37. Stockholm International Peace Research Institute.

Biomedical Imaging. Osamu Hayaishi and Kanji Torizuka, Eds. Academic Press, Orlando, FL, 1986. xvi, 431 pp., illus. \$45. From a symposium, Kyoto, Japan, Oct. 1984.

Cadillac Desert. The American West and Its Disappearing Water. Marc Reisner. Viking, New York, 1986. x, 582 pp. + plates. \$22.95.

Cancer. Perspective for Control. Tak W. Mak and Tsung-Tang Sun, Eds. Liss, New York, 1986. x, 104 pp., illus. \$45. From a symposium, Beijing, Aug. 1985. Published also as *Journal of Cellular Physiology*, supplement 4.

Chemistry of Soil Solutions. Adel M. Elprince, Ed. Van Nostrand Reinhold, New York, 1986. xx, 411 pp., illus. \$57.95. Van Nostrand Reinhold Soil Science Series. A Hutchinson Ross Publication.

Children's Thinking. Robert S. Siegler. Prentice-Hall, Englewood Cliffs, NJ, 1986. xii, 420 pp., illus. Paper, \$22.95.

Clinical Neurochemistry. Vol. 1. Herman S. Bachelard, George G. Lunt, and C. David Marsden, Eds. Academic Press, Orlando, FL, 1986. xiv, 268 pp., illus. \$49.50.

DNA Probes. Applications in Genetic and Infectious Disease and Cancer. Leonard S. Lerman, Ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1986. x, 188 pp., illus. Paper, \$30. Current Communications in Molecular Biology. From a conference, Cold Spring Harbor, NY, April 1986.

Doctors and Medicine in Medieval England 1340-1530. Robert S. Gottfried. Princeton University Press, Princeton, NJ, 1986. xvi, 359 pp. + plates. \$45.

Dual Resonance Models and Superstrings. Paul H. Frampton. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). xviii, 539 pp., illus. \$63; paper, \$33. Augmented reprint of *Dual Resonance Models* (1974).

Energy and Protein Needs During Infancy. Samuel J. Fomon and William C. Heird, Eds. Academic Press, Orlando, FL, 1986. xx, 248 pp., illus. \$26.50. Bristol-Myers Nutrition Symposia, 4. From a meeting, Washington, DC, Dec. 1984.

Evolution. Selected Papers. Sewall Wright. Edited and with introductory materials by William B. Provine. University of Chicago Press, Chicago, 1986. xiv, 649 pp., illus. \$70; paper, \$25.

Glass. Science and Technology. Vol. 3, Viscosity and Relaxation. D. R. Uhlmann and N. J. Kreidl, Eds. Academic Press, Orlando, FL, 1986. x, 412 pp., illus. \$110.

The Griffin. Arnold Kramish. Houghton Mifflin, Boston, 1986. x, 294 pp. + plates. \$17.95.

Guide to Clinical Interpretation of Data. Bert Spilker. Raven, New York, 1986. xxviii, 372 pp., illus. \$36.50.

Guiding, Diffraction, and Confinement of Optical Radiation. Salvatore Solimeno, Bruno Crosignani, and Paolo DiPorto. Academic Press, Orlando, FL, 1986. xiv, 620 pp., illus. \$85; paper, \$49.95.

History and Research in Child Development. Alice Boardman Smuts and John W. Hagen, Eds. University of Chicago Press, Chicago, 1986. x, 163 pp. Paper, \$14.50. Monographs of the Society for Research in Child Development, serial no. 211, vol. 50, nos. 4-5.

Human Lactation 2. Maternal and Environmental Factors. Margit Hamosh and Armond S. Goldman, Eds. Plenum, New York, 1986. xiv, 657 pp., illus. \$95. From a workshop, Oaxaca, Mexico, Jan. 1986.

I Think I Am a Verb. More Contributions to the Doctrine of Signs. Thomas A. Sebeok. Plenum, New York, 1986. xx, 245 pp., illus. \$32.50. Topics in Contemporary Semiotics.

Immunodiagnosis of Parasitic Diseases. Vol. 1, Helminthic Diseases. Kenneth W. Walls and Peter M. Schantz. Academic Press, Orlando, FL, 1986. xii, 301 pp., illus. \$49.

Living Together. The Biology of Animal of Parasitism. William Trager. Plenum, New York, 1986. xii, 467 pp., illus. \$59.50.

Location Theory. Jean Jaskold Gabszewicz *et al.* Harwood Academic, New York, 1986. viii, 190 pp., illus. Paper, \$44. Fundamentals of Pure and Applied Economics, vol. 5, Regional and Urban Economics Section.

London Under Attack. The Report of the Greater London Area War Risk Study Commission. Anne Ehrlich *et al.* Blackwell, New York, 1986. xii, 397 pp., illus. \$34.95; paper, \$14.95.

Mécanique Quantique. Jean-Louis Basdevant. Ecole Polytechnique, Palaiseau, France, and Ellipses, Edition Marketing, Paris, 1986. 574 pp., illus. Paper, F320.

Microcomputers and Their Applications for Developing Countries. Report of an Ad Hoc Panel on the Use of Microcomputers for Developing Countries, Board on Science and Technology for International Development, National Research Council. Westview, Boulder, CO, 1986. xxii, 216 pp., illus. \$30. Westview Special Studies in Science, Technology, and Public Policy.

Molecular Volumes in Chemistry and Biology. Applications Including Partitioning and Toxicity. John C. McGowan and Alan Mellors. Horwood, Chichester, UK, and Halsted (Wiley), New York, 1986. 259 pp., illus. \$54.95. Ellis Horwood Series in Inorganic Chemistry.

Neutron Scattering. Part A. Kurt Sköld and David L. Price, Eds. Academic Press, Orlando, FL, 1986. xiv, 557 pp., illus. \$85. Methods of Experimental Physics, vol. 23.

New Lands, New Men. America and the Second Great Age of Discovery. William H. Goetzmann. Viking, New York, 1986. xiv, 528 pp., illus. \$24.95.

Phytic Acid. Chemistry and Applications. Ernst Graf, Ed. Pilatus, Minneapolis, MN, 1986. viii, 344 pp., illus. Paper, \$54.95. Based on a symposium, New York, April 1986.

Plant Growth Substances 1985. Martin Bopp, Ed. Springer-Verlag, New York, 1986. xiv, 420 pp., illus. \$62. Proceedings in Life Sciences. From a conference, Heidelberg, FRG, Aug. 1985.

Plant Virus Epidemics. Monitoring, Modelling and Predicting Outbreaks. George D. McLean, Ronald G. Garrett, and William G. Ruesink, Eds. Academic Press, Orlando, FL, 1986. xxii, 550 pp., illus. \$71.50.

Recent Progress in Hormone Research. Proceedings of the 1985 Laurentian Hormone Conference, (Banff, Alberta, Canada.) Vol. 42. Roy O. Greep, Ed. Academic Press, Orlando, FL, 1986. xiv, 774 pp., illus. \$82.50.

Science, Technology, and Policy Decisions. Anne L. Hiskes and Richard P. Hiskes. Westview, Boulder, CO, 1986. x, 198 pp. \$35; paper, \$15.95.

Seashore Discoveries. Wesley M. Farmer. Published by the author, P.O. Box 1323, Santee, CA, 92071, 1986. 124 pp., illus. Paper, \$14.95.

The Soviet Oil and Natural Gas Industries. Problems of Reserve Estimation. Alexei Mahmoudov. Delphic Associates, Falls Church, VA, 1986. vii, 95 pp., illus. Paper, \$27.50. The Delphic Emigre Series. Translated from the Russian.

Thought and Language. Lev Vygotsky. Alex Kozulin, Ed. MIT Press, Cambridge, MA, 1986. lxiv, 287 pp. \$27.50; paper, \$9.95. Translated, with revisions, from the Russian edition (Moscow, 1934).

Truncated and Censored Samples from Normal Populations. Helmut Schneider. Dekker, New York, 1986. x, 273 pp., illus. \$49.75. Statistics, vol. 70.

Ultrastructure Techniques for Microorganisms. Henry C. Aldrich and William J. Todd, Eds. Plenum, New York, 1986. xiv, 533 pp., illus. \$69.50.

We Offer Ourselves as Evidence. Toward Workers' Control of Occupational Health. Bennett M. Judkins. Greenwood, Westport, CT, 1986. xii, 251 pp. \$35. Contributions in Labor Studies, no. 19.

When Antibiotics Fail. Restoring the Ecology of the Body. Marc Lappé. North Atlantic Books, Berkeley, CA, 1986. xxii, 246 pp., illus. \$25; paper, \$12.95.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

LINE CLASSIFIED ADVERTISING DEADLINES:
Thursday, 2 weeks prior to issue date (mailed on issue date).

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

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

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

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

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

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

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

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Anatomist/Administrator, Ph.D. Ten years director for human gross anatomy and other medical school programs. Strong clinical orientation. Experienced in: curriculum and course development and review; student and faculty evaluation; student affairs, counseling and tutorials; computer-generated exam design and evaluation. Research program and publications. Supervisor LM and EM facility. Awards for graduate and undergraduate teaching. Seeks academic administrative position. Box 7, SCIENCE. 1/30; 2/6

Biochemist, Cell/Molecular Biologist, Ph.D.; 4 years postdoctorate. Protein purification and characterization, enzyme and nonenzyme assay development, chromatography, spectroscopy, microscopy, cell culture, supervisory experience, Box 9, SCIENCE. X

Biotechnology Researcher, M.S. with industrial experience desires challenging laboratory position. Laboratory experiences include molecular biology, recombinant DNA, fermentation scale-up, microbial strain and process development, and utilization of radioisotopes. Separations techniques include: LC, HPLC, agarose/polyacrylamide electrophoresis, ultrafiltration, and supercritical fluid extraction. Box 234, SCIENCE. X

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

1/30; 2/6, 13, 20

POSITIONS WANTED

Electron Microscopist, M.S. Ten years biological experience including TEM, SEM, x-ray microanalysis, and morphometry. Some STEM and material science also. Looking for responsible position managing EM facility in industry or government. Box 4, SCIENCE. X

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

1/30; 2/6, 13

Marine Fisheries Biologist, Ph.D., age 60, retired from FAO and UNESCO. Ex-university professor. Would like interesting opportunity in management, research, administration or teaching. Short-term or part- or full-time acceptable. Available anytime. Harold Loesch, 2140 East Scott, Pensacola, FL 32503. X

Microbiologist, Recent Ph.D. Experience in virology, bacteriology and parasitology. Has limited molecular biology experience. Desires additional postdoctoral experience in applied molecular biology. Box 3, SCIENCE. X

Research Biotechnology: M.S. with publications, desires challenging laboratory position. Experienced in cell culture, viral purification, nucleic acid chemistry, protein separation and characterization, molecular biology, DNA cloning, radioisotopes, yeast and *Streptomyces* culture, Western blot and other immunological techniques, and microbiological techniques involved in water quality. Box 8, SCIENCE. X

Technical Editor/Writer. Ph.D. in physics, but wide experience in many subjects: mechanical engineering, risk analysis, environmental studies, scientometrics, economics, others. Over 100 papers in journals such as *Science*, *Nature*, as well as four single-author books. In addition, can write for a lay audience: hundreds of newspaper articles, radio talks. I can help your writing/editing projects without capital outlay on your part. I'll do grant applications, library work, public relations writing, manuscript editing, speeches, manuals, many others. Competitive rates. Box 1231, Oak Ridge, TN 37830. X

Technical Writer, Ph.D. Twenty years of experience in research and writing for scientific, technical, and popular markets. Credits include fifteen books in three languages and articles in varied scientific and academic journals. Seeks free-lance projects of all kinds, including manuals, software documentation, grants and proposals, library research, manuscript critiques and editing, ghostwriting, lectures, and speeches. Box 214, SCIENCE. 1/30; 2/6, 13, 20

POSITIONS OPEN

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

POSITIONS OPEN

ADJUNCT ASSISTANT PROFESSOR OF NATURAL SCIENCE. A position is available for the academic year 1987-1988 to teach in a program which integrates principles of the biological and physical sciences in a two-semester non-laboratory sequence for liberal arts students. A teaching load of 12 lecture hours is required. Preference will be given to persons who have a diverse educational background, teaching experience and hold a doctorate in any of the natural sciences. Send curriculum vitae only to: **Dr. Martin D. Saltzman, Natural Science Program, Providence College, Providence, RI 02918.**

The Department of Biochemistry and Molecular Biology at The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, is seeking outstanding individuals at the ASSISTANT or ASSOCIATE PROFESSOR level who use the tools of biochemistry, cell or molecular biology to study aspects of differentiation or development. The Department of Biochemistry and Molecular Biology currently consists of 11 faculty members at all levels who are interested in differentiation or development. Qualified individuals should send their curriculum vitae and summary of research interests by 28 February 1987 to: **Dr. William Klein, Department of Biochemistry and Molecular Biology (Box 117), The University of Texas System Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR

Department of Biology—Chemical Communication. Applicants are invited for a tenure-track position. Appropriate research interests include endocrinology, immunology, neurobiology or cell biology with emphasis on the mechanisms of intercellular communication. The successful applicant will be expected to develop an independent research program and participate in the undergraduate and graduate curriculum. The candidate should possess a Ph.D. and 2 years of postdoctoral experience. The application should include a letter indicating the candidate's principal research interests, a curriculum vitae, and the names of three references. The application should be sent to: **Dr. R. M. Glantz, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.**

Rice University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR UNIVERSITY OF SOUTHERN CALIFORNIA (USC)

Applications are invited for a tenure-track faculty position in the School of Pharmacy and the Comprehensive Cancer Center, USC Health Sciences Campus. Outstanding candidates with research interests in the broad areas of peptide chemistry and biochemistry relating to cancer, with emphasis in the molecular or physical basis of protein structure/function relationships and protein engineering will be considered. The opportunity exists to collaborate with strong research groups in molecular biology, neuropharmacology, and peptide drug targeting/delivery. The candidate will also benefit from participation in the graduate and professional training programs. Submit curriculum vitae, statement of research goals and accomplishments, and arrange for three letters of reference by 15 March 1987 to: **Joon Rho, Ph.D., USC School of Pharmacy, 1985 Zonal Avenue, Los Angeles, CA 90033-1086. Equal Opportunity/M/F/H.**

ASSISTANT PROFESSOR—BIOCHEMIST

The Department of Urology, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, Houston, Texas, invites applications for a tenure-track faculty position in urology research. Strong preference will be given to candidates with 2 to 4 years of postdoctoral experience in recombinant DNA research. The selected candidate is expected to actively participate in an ongoing project on molecular basis of cell-cell interaction in normal and neoplastic prostate gland. Please send curriculum vitae and names of three references to: **Ms. Josephine Hines, Department of Urology, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe, Houston, TX 77030. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

The Department of Biology at the College of St. Catherine has two positions available beginning August 1987.

1) **ASSISTANT PROFESSOR, TENURE TRACK.** Ph.D. required. We are seeking a broadly trained biologist able to teach courses in human anatomy and physiology, comparative vertebrate anatomy and introductory biology. The successful candidate must demonstrate excellence in teaching and will be expected to develop a modest research program in which students can participate.

2) **ASSISTANT PROFESSOR,** temporary, half time. Ph.D. required. Will teach introductory biology and a biology of women course.

Send curriculum vitae, complete transcripts and three letters of recommendation by 1 March 1987 to: **Dr. Deborah Mascioli, Department of Biology, The College of St. Catherine, St. Paul, MN 55105. An Equal Opportunity Employer.**

The Department of Biology invites applications for a tenure-track appointment in molecular biology (plant, animal, or microbial) at the ASSISTANT PROFESSOR level, beginning with the 1987-88 academic year. Favorable teaching load; competitive set-up funds. Adjacent new Biotechnology Center under construction. Appointment subject to administrative approval.

Applicant should send curriculum vitae, a statement of research and teaching objectives, and names and addresses of three references by 1 March 1987 to: **Chairman, Molecular Biology Search Committee, Department of Biology, Tulane University, New Orleans, LA 70118.**

POSITION OPEN—Large interdisciplinary Department of Environmental Health Sciences seeks an ASSISTANT PROFESSOR IN TOXICOLOGY. Two to three years of postdoctoral experience in molecular approaches to toxicology preferable, with research in membrane and/or receptor interactions. Submit curriculum vitae, a brief statement of research interests, and names of three references to: **Dr. Robert J. Rubin, Program in Biochemical Toxicology, Division of Experimental Pathology and Toxicology, Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.**

ASSISTANT PROFESSOR OF INTERNAL MEDICINE, Nephrology Division, The University of Texas Health Science Center at Dallas (UTHSCD). Nontenured research appointment. Requirements: Ph.D. with at least 5 years of experience in in vivo microperfusion techniques and research on epithelial transport. Duties will include independent research in renal physiology and teaching of renal fellows and medical students. Send curriculum vitae and supporting documents to: **Donald W. Seldin, M.D., UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9030. UTHSCD is an Equal Opportunity Employer.**

ASSISTANT PROFESSOR—IMMUNOLOGY

Tenure-track position, research and teaching for recent Ph.D. Postdoctoral experience desirable. Available September 1987. The successful candidate will be expected to establish a vigorous research program and direct graduate students. Candidate can be working in plant, animal, or microbial immunology. Teaching will involve a core course in science and in the area of specialty. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Thomas E. Jensen, Chairman, Department of Biological Sciences, Lehman College, The City University of New York, Bedford Park Boulevard West, Bronx, NY 10468. Application deadline: 16 February 1987.**

Affirmative Action/Equal Opportunity Employer.

ASSISTANT RESEARCH SCIENTIST POSTDOCTORAL POSITION available early 1987, for candidate with doctorate in molecular biology, virology, or cell genetics to work on research project involving the cloning and characterization of genes regulating cell cycle progression in animal cells; regulation of polyoma virus gene expression in transformed cells; and the study of a novel human oncogene derived from Kaposi's sarcoma DNA. Send curriculum vitae and names of three references to: **Joan Harmon, Personnel Department, New York University Medical Center, 317 East 34 Street, 7th Floor, New York, NY 10016. An Affirmative Action/Equal Opportunity Employer M/F.**

POSITIONS OPEN

ASSISTANT PROFESSOR NONTENURE TRACK AND DIRECTOR OF MOLECULAR BIOLOGY CORE FACILITY. Ph.D. required with 5 years of experience operating a core service laboratory in nucleic acid and protein chemistry. Must conduct DNA and protein syntheses. \$35,000 to \$39,000. Apply to: **Dr. Joseph Coggin, Jr., University of South Alabama, Department of Microbiology, Mobile, AL 36688. The University of South Alabama is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSORS OF BIOLOGY TWO TENURE-TRACK POSITIONS

Two tenure-track positions in the Department of Sciences and Mathematics will be filled for fall 1987. A doctorate in the biological sciences is preferred, but those near the degree will be considered. Applicants should be primarily committed to teaching, but research and interdisciplinary interests are desirable. Teaching will include introductory biology and general undergraduate biology courses. For one position, emphasis will be on organismal to supraorganismal courses. The other position emphasis will be on organismal to subcellular courses. The salary range is \$22,000 to \$25,000.

Screening will begin 15 March 1987. Send curriculum vitae, three letters of reference, evidence of teaching success or a statement on teaching to: **Dr. Richard W. Robinson, Chairman of the Search Committee, University of Maine at Farmington, 39 High Street, Preble Hall, Farmington, ME 04938.**

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

LOCK HAVEN UNIVERSITY LOCK HAVEN, PA 17745

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

DIRECTOR, ONCOLOGY CENTER

The Johns Hopkins University School of Medicine and The Johns Hopkins Hospital are seeking a physician-scientist to lead our Department of Oncology, which is also a Comprehensive Cancer Center. Applicants should have evidence of leadership qualities and demonstrated outstanding abilities in research and teaching as well as the capability to direct the service missions of the Center.

Please send letter of application, curriculum vitae, and bibliography to: **Dr. Richard J. Johns, Chairman, Oncology Search Committee, 720 Rutland Avenue, Baltimore, MD 21205.**

An Affirmative Action/Equal Opportunity Employer. Deadline date for submission: 1 March 1987.

POSTDOCTORAL POSITION

Available immediately to join a group studying the structure, regulation and physiological functions of protein phosphatases. The project will involve (i) determining the structure of the protein phosphatase inhibitor-1 gene and (ii) using site-directed mutagenesis to study structure/function relationships of the inhibitor-1 protein. Inhibitor-1 is a heat-stable protein involved in the regulation of protein phosphatase 1 by cAMP and calcium ions. Applicants should have a strong background in recombinant DNA technology. Salary: \$23,000. Send curriculum vitae, statement of research interests and names of three references to: **Dr. Thomas S. Ingebritsen, Department of Zoology, Iowa State University, Ames, IA 50011-3223.**

**DEPARTMENT OF MOLECULAR GENETICS
AND MICROBIOLOGY
UNIVERSITY OF MEDICINE AND
DENTISTRY OF NEW JERSEY-ROBERT
WOOD JOHNSON MEDICAL SCHOOL**

The Department of Molecular Genetics and Microbiology is seeking candidates for **FACULTY POSITIONS** at all ranks. **POSTDOCTORAL RESEARCH ASSOCIATES, RESEARCH ASSISTANTS** and **GRADUATE STUDENTS**. Applicants with high scholarly achievement for faculty positions will be considered in all areas related to molecular genetics and microbiology. In order to develop and strengthen programs, we particularly welcome applications from investigators in the following areas: retroviruses, expression vectors, molecular immunology, and developmental biology. Postdoctoral research associates and research assistants with experience in one of the following areas will be considered: protein purifications and chemistry, enzymology, cDNA and gene cloning, and microinjection techniques. An **ADMINISTRATIVE COORDINATOR** position (business manager/grants administrator) is also available (a Bachelor's degree plus a minimum of two years of related experience preferred—experience may be substituted for the degree on a year for year basis. Applicants for the faculty positions, postdoctoral positions and graduate students should send C.V., a concise statement of research accomplishments and plans, and the names of 4 references to: **Dr. Sidney Pestka, Chairman, Dept. of Molecular Genetics and Microbiology, (SCI), University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635**. Applicants interested in research assistant positions or the administrative coordinator position should submit their resumes to the Department of Human Resources at the above address. UMDNJ is an equal opportunity/affirmative action employer m/f/h/v.

**SCIENTIST
(MICROBIOLOGIST)**

Salsbury Laboratories, Inc., a leader in the development and marketing of Animal Health vaccines worldwide, has an immediate position available for a Microbiologist in our Biological Development Department.

Our candidate will have a Ph.D. in microbiology with a minimum of five years experience in vaccine development. The selected individual will be intimately knowledgeable of poultry diseases and record of success in the development of vaccines for their prevention.

For the individual who is unafraid of rolling up their shirt-sleeves and working in an environment that is end result oriented, we offer a competitive salary and benefits program.

Do not hesitate, send your resume today and become a member of a forward thinking Animal Health company.

Director of Human Resources



**SALSBU
LABORATORIES, INC.**

2000 Rockford Road
Charles City, IA 50616

An Equal Opportunity Employer

**POST DOCTORAL
POSITION—
MOLECULAR BIOLOGY**

**NATIONAL INSTITUTES
OF ALLERGY AND INFECTIOUS
DISEASES**

**NATIONAL INSTITUTES
OF HEALTH**

PUBLIC HEALTH SERVICE

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

An Equal Opportunity Employer

**An important pharmaceutical laboratory
nearby Paris
offers a research position for a**

**ID
Pharmacologist-
Biochemist**

*, with interest in the pharmacology of hypertension
(renin-angiotensin system, sympathetic nervous system).
The candidate should have a PhD or equivalent experience
in the mentioned research areas.*

*Please send C.V. + photo with a letter and your requirements
quoting reference 2953 on the envelope to
Media-System, 2 rue de la Tour-des-Dames, 75009 Paris.
France, who will forward your dossier to us.*

**Research
Scientist
Virology**

We're Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines.

As a member of our staff, you will conduct research related to the immune system's responses to viral infections and the development of viral vaccines. Candidates should have a PhD in Virology, Immunology or related field with a minimum of 2 years postdoctoral experience. This should include extensive work with immunological assay systems and a strong background in immune responses to infectious agents. Experience with animal model systems is highly desirable.

Please send your resume and salary requirements to:
**Human Resources Department, Praxis Biologics, 300
East River Road, Rochester, NY 14623.**

**PRAXIS
BIOLOGICS**

An equal opportunity employer, m/f.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR. One or possibly two positions in exercise physiology for Ph.D.'s with postdoctoral and research experience in either human environmental physiology (heat), or the adaptations of skeletal muscle tissue to exercise. Individuals will be expected to teach, attract graduate students and compete for external funding. Submit letter of application, curriculum vitae, three reprints and three letters of recommendation to: **C. M. Tipton, Ph.D., Head, Department of Exercise and Sport Sciences, University of Arizona, Tucson, AZ 85721.** Deadline 10 March 1987. *An Affirmative Action/Equal Opportunity Employer.*

BOTANY POSITION: Colorado College invites applications for a 1-year, with an anticipated second year, nontenure-track position in systematic botany. Courses to be taught include beginning undergraduate courses in botany, plant evolution, and field botany. Advanced undergraduate courses in flowering plant evolution will be offered based on training. Special consideration will be given to those applicants with knowledge and skills in floristics, cytogenetics, numerical taxonomy, and cladistics. Skills in maintaining and expanding a regional herbarium are required. A research program is an important aspect of the position. Ph.D. is required. Physiologists, ecologists, and paleobotanists should not apply. Starting date is 1 August 1987. The Colorado College is a private, undergraduate, liberal arts college enrolling 1850 students. Women and minorities are encouraged to apply. Send letter of application describing teaching and research interests, curriculum vitae, copies of official transcripts, publications, and three letters of recommendation to: **Jack L. Carter, Department of Biology, The Colorado College, Colorado Springs, CO 80903** prior to 28 February 1987. *An Equal Opportunity Employer.*

CELL BIOLOGIST/BIOCHEMIST ASSISTANT PROFESSOR

Institute for Environmental Medicine of the University of Pennsylvania School of Medicine seeks Ph.D. or M.D. for tenure-track appointment. Successful candidate will interact with respiratory physiologists and will develop an independent research program. Areas of special interest include secretion or endocytosis of macromolecules, intracellular processing of lipids or lipoproteins, differentiation and development of epithelial cells, and oxyradical generation and antioxidant defenses. Scientists in other fields of potential application to the respiratory system are encouraged to apply. Teaching duties will depend on qualifications of the successful candidate. Deadline for applications is 30 June 1987. Applicants should send curriculum vitae, statement of research interests, and names of three references to: **Aron B. Fisher, M.D., Director, Institute for Environmental Medicine, Chair, Cell Biology Search Committee, University of Pennsylvania School of Medicine/6068, Philadelphia, PA 19104.** *Equal Opportunity/Affirmative Action Employer.*

ELECTRON MICROSCOPIST

Position available for supervisor of transmission electron microscopy laboratory. Requires B.S. or M.S. in biology and minimum of 2 years of experience in electron microscopy. Experience in cell and tissue culture also desirable.

Position involves operation of a laboratory in which cell biologists are conducting research on the regulation of cell growth and differentiation. Responsibilities include processing of cells and tissues for ultra-thin sectioning and critical point drying, implementation of new techniques, training of junior staff, and routine maintenance of an Hitachi HU12 electron microscope.

Send résumé and salary requirements to:

**James G. Kerr
Department B181
Southern Research Institute
P.O. Box 55305
Birmingham, AL 35255-5305**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS immediately available to study the electrophysiology and pharmacology of cardiac arrhythmias and neurophysiologic control of hypertension. NRSA training grant. U.S. citizenship or permanent residence required.

Send curriculum vitae to: **Dr. Charles Antzelevitch, Masonic Medical Research Laboratory, Utica, NY 13504.** Telephone: 315-735-2217.

POSITIONS OPEN

CHEMISTRY: ASSISTANT PROFESSOR/INSTRUCTOR OF CHEMISTRY for tenure-track, full-time teaching position to teach introductory chemistry, organic chemistry, and upper division courses in a science department of six persons. Ph.D. required, collegiate teaching experience preferred. Rank related to experience. Deadline for application: 15 February 1987. Send statement of teaching and research interest with letter of application, résumé, and three references to: **Dr. Jill H. Ellsworth, Associate Academic Dean, Castleton State College, Castleton, VT 05735.** *Affirmative Action/Equal Opportunity Employer.*

DIRECTOR INTERNATIONAL PROGRAMS IN AGRICULTURE AND ASSOCIATE DEAN COLLEGE OF AGRICULTURE THE OHIO STATE UNIVERSITY

The Ohio State University is seeking applications and nominations for **DIRECTOR, INTERNATIONAL PROGRAMS IN AGRICULTURE.** The person will serve as an Associate Dean in the College. Major responsibilities include the planning, coordination, resource development, and implementation of international activities funded through a variety of sources. An earned Ph.D. degree is required. The person must qualify for a tenured faculty position, and preferably have an understanding of the Land-grant system.

Position announcements may be secured from or nominations and applications may be sent to: **Dr. Larry E. Miller, Search Committee Chairperson, The Ohio State University, 116 Agriculture Administration Building, 2120 Fyffe Road, Columbus, OH 43210-1099.** Telephone: 614-292-3897. Applications will be accepted to 15 February 1987 or until the position is filled.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGIST. We are looking for a qualified person to work in an immunoassay laboratory devoted to the quantification of apolipoproteins with an emphasis on automated ELISA. Past experience in immunoassay techniques required. Salary level according to qualifications. For inquiry contact: **Dr. A. M. Scanu, Director, Lipoprotein Study Unit, University of Chicago, 5841 South Maryland, Box 231, Chicago, IL 60637;** telephone 312-962-1775. *Equal Opportunity Employer.*

MOLECULAR VIROLOGIST

The Department of Medical Microbiology and Immunology, The Ohio State University Medical Center, invites applications for a tenure-track faculty position at the rank of assistant professor. Applicants must have a strong background in molecular virology, emphasis on herpesviruses (Epstein-Barr virus in particular). Qualified applicants should arrange to have curriculum vitae and three letters of recommendation sent to: **Ronald Glaser, Ph.D., Professor and Chairman, Department of Medical Microbiology and Immunology, The Ohio State University, 333 West 10 Avenue, Columbus, OH 43210.** Deadline for completed applications is 13 March 1987. *The Ohio State University is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. A position is available immediately in the field of intercellular communication. Applicant must have Ph.D. in physics, chemistry, or biology. Electrophysiological and computer expertise necessary. Send application letter, curriculum vitae, and the names of three references to: **Dr. P. R. Brink, Anatomical Sciences, HSC, School of Medicine, State University of New York (SUNY), Stony Brook, Stony Brook, NY 11794.** *SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer.*

RADIOBIOLOGIST, TUMOR AND CELLULAR

Research associate level in an academic setting. Candidates should be able to demonstrate thorough knowledge of the field through a strong record of publication. Successful candidate will join a research group designing, synthesizing and evaluating new radio-sensitizers. Salary \$31,647. Ph.D. in biology and no experience required. Job site Stanford. Send this ad and your résumé to: **Job #DC-11163, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 14 February 1987.

POSITIONS OPEN

Oregon Agricultural Experiment Station: Oregon State University invites nominations and applications for the position of **DIRECTOR OF OREGON AGRICULTURAL EXPERIMENT STATION AND ASSOCIATE DEAN, COLLEGE OF AGRICULTURAL SCIENCES.** The Director and Associate Dean administers and leads the statewide agricultural research programs carried out in eight colleges on campus, nine branch stations and in associated research centers. The Director is a key member of the college's administrative team, together with the Dean and the Directors of Extension, Academic Programs, and International Agriculture. Qualifications include a Ph.D. degree in agriculture or related discipline and experience in agricultural research and administration. The position is a 12-month, tenured appointment at the rank of professor. Salary will be commensurate with experience and qualifications. Position available 1 September 1987 or soon thereafter. Nominations due 6 April. Résumés and names of references from interested candidates due 15 April 1987. The search will be conducted confidentially. Letters of reference will be sought only with the knowledge and consent of top candidates following screening of professional résumés. For more information contact: **C. J. Weiser, Office of the Dean, College of Agricultural Sciences, Oregon State University, Corvallis, OR 97331-2212.** Telephone: 503-754-2331.

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. Women and minority candidates are especially encouraged to apply.

MOLECULAR BIOLOGIST. Warren Wilson College, a small liberal arts college on 1100 acres in Blue Ridge Mountains near Asheville, NC, seeks Ph.D. with proven teaching ability and research potential. Well-equipped research lab. Teaching will include genetics, physiology, biochemistry, and microbiology. Submit curriculum vitae and three supporting letters to: **Dr. Paul Bartels, Department of Biology, Box 5032, Warren Wilson College, 701 Warren Wilson Road, Swannanoa, NC 28778.** *Equal Opportunity Employer.* Deadline 1 March 1987.

Research Associate

To develop software for analysis, display and archiving of oceanographic satellite data. Responsible for operation and maintenance of network of SUN workstations. Master's degree in Science/Engineering and experience with oceanographic data processing and writing graphics software. Firm understanding of the UNIX system and proficiency of FORTRAN required. Familiarity with PASCAL and C languages desired.

Apply to:

**Personnel Manager
Box 54P**



**WOODS HOLE
OCEANOGRAPHIC
INSTITUTION**

Woods Hole, MA 02543

An equal opportunity employer M/F/H/V

NATIONAL INSTITUTE ON AGING

National Institutes of Health Public Health Service

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

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

An Equal Opportunity Employer

CHAIR, DEPARTMENT OF ANATOMICAL SCIENCES

City University of New York Medical School

Applications and nominations are invited for the Chair of a new Department of Anatomical Sciences at CUNY Medical School. The School has a special obligation to emphasize the significant emerging role of primary care as well as to increase the number of physicians in underrepresented minorities in the nation's physician pool and to enhance the availability of medical services to underserved areas.

Candidates should be recognized as outstanding in research, have strong teaching credentials and have administrative strengths. Salary competitive and commensurate with experience. Please send letters of application or nomination, curriculum vitae and the names, telephone numbers and addresses of three references by March 15, 1987 to: **Dr. Meir Lev, Chair, Search Committee for Anatomical Sciences, City University of New York Medical School**



**CITY COLLEGE OF CUNY
Convent Av & 138 St
New York, NY 10031**

An AA/E0 Employer M/F

MOLECULAR BIOLOGY GROUP LEADER

Agouron Pharmaceuticals is a rapidly growing company committed to the exploitation of protein structure in the design of novel therapeutic molecules. Agouron's scientific strategy relies upon strong interdisciplinary interactions between molecular biology, protein crystallography, and organic chemistry. Our state-of-the-art facilities occupy a seaside location in the vigorous scientific community of La Jolla, California.

We seek a senior scientist (not less than five years of postdoctoral experience) with a broad background and an abiding interest in the cloning, characterization and expression of prokaryotic and eukaryotic genes as group leader in molecular biology. Attractive compensation package includes stock options.

Send *curriculum vitae* and references in strict confidence to:

Reference MB



AgouronTM
Pharmaceuticals, Inc.

505 Coast Boulevard South
La Jolla, California 92037

ASSOCIATE EDITOR

SCIENCE MAGAZINE

Editorial position available for a Ph.D. biochemist or molecular biologist with two or three years of research experience; specific capability in structural biochemistry, immunology, and enzymology; wide general interest in biological sciences; and publications in the refereed literature. Initial duties will include editing manuscripts for clarity and style. Progress to wide responsibilities in manuscript selection is expected. Previous editorial experience not required. This is a full-time position in our Washington, D.C. editorial office.

Please submit résumé with cover letter, including salary requirements to:

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

We are an Equal Opportunity Employer.

RESEARCH SCIENTIST

Ortho Pharmaceutical, a Johnson & Johnson Company, is respected worldwide for its continued success in the advancement of vital research to improve the quality of life. To support our continued commitment, we are seeking a scientist to develop new research and contribute to on-going projects.

Working closely with medicinal chemistry, you will be expected to create a drug discovery program in Reproductive/Endocrine Research and develop clinically predictive biological assays.

The successful candidate will have a Ph.D. in endocrinology, pharmacology or equivalent, with 0-2 years' industrial experience or postdoctoral research in reproductive endocrine pharmacology or bone physiology.

We offer a competitive salary and the outstanding benefits, professional growth and opportunity you would expect from a Johnson & Johnson Company. For prompt, confidential consideration, please forward your resume with salary history and requirements to: Mr. Frank Folio, Dept. 2, ORTHO PHARMACEUTICAL CORPORATION, P.O. Box 300, Route 202, Raritan, New Jersey 08869-0602.

**Ortho Pharmaceutical
Corporation**

A Johnson & Johnson Company



A LOT MORE THAN YOU THINK

An Equal Opportunity Employer m/f

POSITIONS OPEN

POSTDOCTORAL POSITION—The Dana-Farber Cancer Institute has a postdoctoral position available in summer 1987 for a qualified candidate with M.D. or Ph.D. to study the molecular genetics of human DNA repair genes, particularly the genes for enzymes involved in repair of x-ray-induced DNA damage. Previous experience in prokaryotic or eukaryotic molecular biology is desirable. Joint appointment will be held in an appropriate department of Harvard Medical School. Candidates are encouraged to apply to: **Dr. William D. Henner, Director of Cancer Pharmacology, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION now available in biochemistry. We are an established group in the area of membrane structure and function, magnetic resonance spectroscopy and biophysics, with interests in signal transduction, protein kinases, phospholipase c, and molecular basis of tumor promotion. We are looking for a colleague with mutual interests and a strong background in biochemistry. Cloning experience helpful. Send curriculum vitae and names and addresses of three references to: **Dr. O. Hayes Griffith, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403 by 15 February 1987. Telephone: 503-686-4634. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN FETAL PHYSIOLOGY/ENDOCRINOLOGY

Available July 1987, position supported by USPHS-NIH training grant. Various aspects of the regulation of fetal cardiovascular—endocrine interactions, the regulation of fetal and placental growth and differentiation by growth factors and hormones, and the hormonal and neuroendocrine regulation of the onset of labor are under investigation. Studies may involve the use of in vitro and in vivo approaches as well as mathematical modeling.

Applicants should have a strong background in endocrinology, physiology, cell biology, or mathematics. Send curriculum vitae and the names of three references to: **Dr. Lawrence D. Longo, Division of Perinatal Biology, Department of Physiology, School of Medicine, Loma Linda University, Loma Linda, CA 92350. Equal Opportunity Employer.**

POSTDOCTORAL TRAINING IN PLANT MOLECULAR BIOLOGY, MOLECULAR BIOLOGY, BIOCHEMISTRY, AND GENETICS

The Plant Gene Expression Center (PGE) in Albany, California, sponsored by USDA's Agricultural Research Service and the University of California, Berkeley, invites applications for qualified candidates with Ph.D. degrees for ten postdoctoral positions. The PGE is an interdisciplinary program designed to provide plant agriculture with the technology to maintain and enhance the quality and productivity of the agricultural product.

The PGE programs include: auxin-regulated gene expression (**A. Theologis**); maize transposable elements (**B. Baker**); monocot transformation (**M. Fromm**); gene expression in transgenic plants (**D. Ow**); developmental mutants of maize (**S. Hake**); flower development (**S. McCormick**); and phytochrome regulation (**P. Quail**). Candidates should be familiar with molecular biology, biochemistry, or genetics. Salary is commensurate with experience with a range of \$22,000 to \$27,000. For information on the research program and/or positions, telephone: **Gerald G. Still 415-486-3662**. To obtain federal application forms, contact: **Patricia Roberts 301-344-3138, USDA, Agricultural Research Service, Room 405, Building 003, BARC-W, Beltsville, MD 20705. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE with Ph.D. in electrical engineering or biophysics needed to participate in development and operation of a human motor physiology laboratory studying basic mechanisms underlying control of voluntary movement and motor disability caused by neurological disease. Physiological, electronics and computer programming experience required. Write to: **Timothy A. Pedley, M.D., Chairman, Committee on Appointments and Promotions, Department of Neurology, College of Physicians and Surgeons, 710 West 168 Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**



Center for Technology and Policy Boston University

Bell and Howell Postdoctoral Fellowships

The Center invites nominations and applications for Bell and Howell Postdoctoral Fellows in Technology and Policy to perform research in the following areas: (1) decision making in a rapidly changing technological environment or (2) industrial innovation, including implementation and diffusion of technology in industrial firms, industrial research productivity, and international competitiveness.

Responsibilities: Fellows are expected to engage in research in one of the designated areas, to participate in the scholarly activities of the Center, to assist the heads of Center research units in generating new research projects, and to prepare a final report summarizing the year's work.

Qualifications: A recent doctorate in Engineering or Physical Science, with specialization in one of the identified areas and a commitment to research and publication.

Stipend and Appointment: Initial appointment for one year with a stipend of \$25,000 to \$30,000, depending on experience, with possibility of long-term appointment. Appointments will be made for July 1, 1987, and September 1, 1987.

Applications: Applications with a statement of interest, vitae, and three letters of recommendation, and copies of published work must be received by April 1, 1987. Please send to:

Professor Yoram Neumann, Chair
Bell and Howell Search Committee
Center for Technology and Policy
Boston University
197 Bay State Road
Boston, MA 02215

Boston University is an equal opportunity institution.

STUDY DIRECTOR

Avian Toxicology

The Corporate Toxicology Facility of Mobay Corporation located in Kansas City is currently searching for a qualified PhD professional to handle the following responsibilities:

- Planning and directing all acute toxicity studies, reproduction studies, and field studies with technical and formulated agrichemical products
- Scientific interpretation and analysis of study results and technical report preparation
- Contracting and monitoring of all work conducted through outside labs
- Future planning and development in the area of avian/wildlife toxicology

Qualified candidates should possess PhD and several years experience as a study director dealing with avian toxicology.

Position offers a competitive salary and comprehensive paid benefits package including complete relocation. Send curriculum vitae and salary history to: **R.M. Dischner, P.O. Box 4913, Kansas City, Mo. 64120.**



**Mobay
Corporation**

We Are An Equal Opportunity Employer... M/F/Handicapped

DEAN College of Arts and Sciences Northeastern University

Applications and nominations are invited for the position of Dean of the College of Arts and Sciences at Northeastern University, Boston, Massachusetts. The College of Arts and Sciences is one of the largest of the nine colleges at Northeastern University, and enrolls 2700 majors in undergraduate programs and 850 majors in graduate programs. The college has over 300 full-time faculty members in 19 departments in the Natural Sciences, Social Sciences, Humanities and Arts.

The Dean is the chief administrative and academic officer of the College, reporting directly to the Provost of the University. He or she is responsible for the leadership, supervision and development of the faculty and staff, the academic and research programs, and the coordination of the academic advising of students. The Dean is also responsible for program planning, the development and implementation of the budget, the development of long-term goals of the College, including the recruitment and retention of minority and women faculty, the coordination of college programs with other units of the University, and the enhancement of sponsored and unsponsored research and scholarship.

The position requires an earned Ph.D. or its equivalent in the Arts or Sciences, a distinguished record of teaching and scholarship, and demonstrated experience in academic administration. The individual selected must qualify for an appointment as a tenured professor in a discipline in the College. Applicants should be persons committed to the ideals of liberal education and capable of providing creative leadership. Salary will be commensurate with experience and qualifications.

Applications or nominations, including a complete curriculum vitae and the names of five references, submitted by March 1, 1987 will receive full consideration. Materials should be sent to:

Professor Carol A. Owen
Chairperson,
Dean Search Committee
Department of Sociology/
Anthropology
500 Holmes Hall
Northeastern University
360 Huntington Ave.
Boston, MA 02115

Northeastern University is an Affirmative Action, Equal Opportunity, Title IX Employer. Minorities and women are encouraged to apply.

**Northeastern
University**

RESEARCH SCIENTISTS/ASSOCIATES SPECIALTY CHEMICALS AND ENZYMES

An industry leader in advanced biotechnology, **Amgen** develops products for a wide variety of applications, including Specialty Chemicals and Enzymes. Recent progress has created opportunities for highly qualified Research Scientists and Research Associates.

Research Scientists will be involved in molecular biology and genetic enhancement of bacterial strains which synthesize industrial enzymes. In addition to a Ph.D. degree, several years of related postdoctoral experience in one or more of the following areas of expertise is required:

- Bacterial Genetics
- Molecular Biology or Enzymology
- DNA cloning and expression in Gram positive bacteria, particularly **Bacillus**

Research Associates should possess a BS/BA or MS preferably in biochemistry, genetics, or biology, and have several years of research experience.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating and challenging scientific environment, as well as an attractive compensation and benefits program. Qualified candidates should direct a resume, including a list of publications, and three references to:

Recruitment, Dept. 114
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320

Equal Opportunity Employer

AMGen

Neuropharmacologist

New Jersey

Anaquest, a Division of BOC Inc, is a leader in the development and manufacture of acute care pharmaceuticals for anesthesia professionals. Our pharmacology department is looking for an accomplished Neuropharmacologist to join the drug discovery team at our Murray Hill, NJ facility.

You will be responsible for designing, supervising and conducting pharmacological research studies as well as some training and supervision. You will be heavily involved in the development of 1 or more anesthesia-related research areas and the research effort for publication. In addition, you will be in constant contact with management to discuss department needs and report progress and project development.

You must have a Ph.D. or equivalent in pharmacology, biochemistry, neuroscience or a related discipline, and up to 3 years' postdoctorate experience. Expertise in a variety of neurochemical methodologies including receptor binding, enzyme assays and HPLC, and a sound knowledge of neuroanatomy, are essential. You must also have a current publication record and excellent written and oral communication skills. Experience with IBM micro- and Digital VAX minicomputers would be helpful.

In addition to a competitive salary and benefits package, you will play an integral role in the further development of our biochemical pharmacology research area. For immediate consideration, send your c.v. and salary requirements to: Employee Relations Manager, The BOC Group Technical Center, 100 Mountain Ave., Murray Hill, NJ 07974.

An Equal Opportunity Employer, M/F/V/H.

Anaquest



BOC Health Care

POSITIONS OPEN

MASS SPECTROMETRIST

Position available immediately at the **Children's Hospital of Philadelphia and the Department of Pediatrics, University of Pennsylvania School of Medicine** for a **RESEARCH ASSOCIATE** in the Mass Spectrometry Laboratory. The candidate must have experience in gas chromatography-mass spectrometry and isotope ratio-mass spectrometry. Candidate will assist with projects involving use of stable isotopes in metabolic studies of the kidney and brain. The applicant should possess M.A. or Ph.D. and a strong knowledge of mass spectrometry instrumentation. A background in biomedical mass spectrometry is desirable but not essential. Salary and academic status are negotiable and will be commensurate with the applicant's experience.

Send curriculum vitae and names of three references to:

Marc Yudkoff, M.D.
Division of Metabolism
Children's Hospital of Philadelphia
34th Street and Civic Center Boulevard
Philadelphia, PA 19104

RESEARCH ASSOCIATE position to be offered at basic pay rate of \$1750 per month, 37.5 hours weekly from 8:00 a.m. to 4:30 p.m. Monday through Friday. This person will use radiolabeled substances to determine monoamine oxidase activity in body tissues and to test for inhibition of the enzyme. He or she will use low-pressure chromatography columns to separate peptides and other substances from human blood, CSF and other bodily tissues. He or she will also use high-performance liquid chromatography to array extracts for substances of interest. The position requires a Ph.D. in biochemistry and 1 year of experience in a similar or related position such as research associate in pharmacology or chemistry. No special training is required. Please send résumés to: **Illinois Job Services, Attention: Joan Haight, 401 South State Street, 3 South, Chicago, IL 60605, Reference #6621-H.** An employer-paid ad.

RESEARCH GEOPHYSICIST

RESEARCH GEOPHYSICIST: Required for stratigraphic seismic processing research group. Responsibilities include: research and development of new seismic stratigraphic processing technology; integration of these applications into the existing proprietary seismic processing system; and personal interaction with and communication of results to research, processing, and operating company geophysicists. Reports to Supervisor, Seismic Recording and Processing Section. Broad background is necessary in seismic data processing, computational physics, and digital signal processing. Excellent scientific programming skills and experience required. Working knowledge of VAX, IBM, and CRAY operating systems and vectorizing techniques highly desirable. Ph.D. in geophysics, physics, or digital signal processing required. Applicant's background should include at least 5 years of oil industry experience, including 2 years in exploration or seismic data processing operations. Must have strong communication and interpersonal skills to interface with other research projects, data processing groups, and exploration operations. Excellent working conditions and technical facilities. Salary in \$50,000 range. Qualified applicants should apply to: **Chevron Oil Field Research Company, Human Resources, P.O. Box 446, La Habra, CA 90631.** An Equal Opportunity Employer.

RESEARCH INVESTIGATOR position available to characterize neurotransmitter receptors, investigate acetylcholine biosynthetic mechanisms, and analyze structure activity relationships of pharmacologic agents. A Ph.D. in biochemistry, training in neurochemistry or neuropharmacology, and publications in peer-reviewed journals are required. The applicant should have expertise in enzyme kinetics, structure activity relationships, physiological studies involving neuromuscular transmission using both in vivo and in vitro bioassay, electrophysiological studies using voltage clamp and computer analysis. Salary range: \$19,695 to \$24,360 per year depending on qualifications; 40 hours per week. Send curriculum vitae and three letters of reference to: **Iowa Job Service, 1810 Lower Muscatine Road, Iowa City, IA 52242. Job Order Number 1629732.** This is an employer-paid ad. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE to study control of renal microcirculation. Research focuses on inter- and intracellular control mechanisms. M.D. or Ph.D. required. Background in renal physiology, microcirculation desirable. Send curriculum vitae and names of three references to: **Donald J. Marsh, Department of Physiology and Biophysics, University of Southern California School of Medicine, 1333 San Pablo Street, Los Angeles, CA 90033.**

USC is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE IN MOLECULAR NEUROSCIENCE, University of Texas Health Science Center at Dallas, Department of Neurology, invites applications from M.S., Ph.D. or M.D. individuals with comprehensive experience in molecular genetics to pursue: (i) characterization of reiterated DNA sequences and their possible transcriptional products altered during mammalian brain development or oncogenesis of glioma and neuroblastoma and/or (ii) Northern blot analysis of hormonal induction of specific mRNAs in developing neural tissue. Interested applicants should send curriculum vitae and names of three references to: **Dr. Roger N. Rosenberg, Department of Neurology, UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9036.** UTHSCD is an Equal Opportunity Employer.

RESEARCH POSITION AVAILABLE HUMAN NEUROPHYSIOLOGIST/ PSYCHOPHYSIOLOGIST

Immediate opening in unique project integrating Event-Related Potential (ERP), Magnetoencephalogram (MEG), Positron Emission Tomography (PET), and Magnetic Resonance Imaging (MRI) technologies. Exceptional quantitative skills and facility with computers are essential. Send résumé to: **K. Dean, EEG Systems Laboratory, 1855 Folsom Street, Room 610, San Francisco, CA 94103.**

RESEARCH SCIENTIST

The University of Texas Health Science Center at San Antonio is recruiting for a research scientist position. A doctoral degree with major course work in the field of nuclear magnetic resonance and 2 years of experience are required. Please send curriculum vitae to: **The University of Texas Health Science Center at San Antonio, Office of Human Resources, 7703 Floyd Curl Drive, San Antonio, TX 78284.**

Equal Opportunity/Affirmative Action Employer

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

POSITIONS OPEN

RESEARCH SCIENTIST. General Motors Surgical Research Laboratory, Memorial Sloan-Kettering Cancer Center. Ph.D. with 2 to 5 years of experience in areas related to defining cellular and molecular properties of metastatic cancer cells/host factors which might determine organ localization of the cells. Excellent opportunity to develop an independent research program in a supporting scientific milieu. The program has been funded. Send curriculum vitae, bibliography and names of three references to: **Dr. Joseph G. Fortner, Director, General Motors Surgical Research Laboratory, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. Telephone: 212-794-7466.**

An Equal Opportunity/Affirmative Action Employer.

STAFF SCIENTISTS, MONOCLONAL ANTIBODY SECTION

Rapidly growing company developing biological therapies for cancer has immediate need for additional staff scientists with experience in generating hybridomas and screening monoclonal antibodies reactive with tumor cells. Excellent opportunity to participate in research rapidly applied to human therapeutics.

Send curriculum vitae to:

Dr. Robert K. Oldham
Biotherapeutics Inc.
400 Eddy Lane
Franklin, TN 37064

UNIVERSITY OF ALASKA-FAIRBANKS SYDNEY CHAPMAN ENDOWED CHAIR IN PHYSICAL SCIENCES

The University of Alaska-Fairbanks invites nominations for the Sydney Chapman Chair in the Physical Sciences. The University of Alaska at Fairbanks has well-established undergraduate and graduate programs in the physical sciences. Research is conducted through affiliation with the Institute of Marine Science, Institute of Arctic Biology and the Geophysical Institute. The candidate for the Chapman Chair must be a distinguished physical scientist in physics, chemistry, astronomy, or earth sciences, including all physical and chemical areas of study of the earth, oceans, and atmosphere. Preference will be given to candidates who interface with existing programs. The candidate will be expected to maintain a vigorous research program and to take an active part in teaching through classes and seminars.

Please submit letters of nomination by 1 May 1987, to: **Chairman, Search Committee, Sydney Chapman Chair, College of Natural Sciences, 465 Duckering Building, University of Alaska-Fairbanks, Fairbanks, AK 99775-1240.** Application for employment with the University of Alaska may be subject to public disclosure if selected as a finalist. *The University of Alaska is an Affirmative Action/Equal Opportunity Employer and Educational Institution.*

VIRUS STRUCTURE

Two positions are available for **RESEARCH ASSOCIATES** to participate in a study of the structure and function of enveloped viruses using cryoelectron microscopy and image processing, coupled with biochemical and biological techniques. Applicants with a recent Ph.D., a strong background in biochemistry or molecular biology and an interest in structural biology are encouraged to apply. Please send curriculum vitae and three letters of recommendation to either: **Dr. W. Chiu or Dr. M. Hewlett, Department of Molecular and Cellular Biology, Bioscience West Building, University of Arizona, Tucson, AZ 85721.** Closing date for these positions is 30 April 1987. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

ZOOLOGIST

Continuing faculty position at College of the Atlantic (COA). Teaching courses in zoology, physiology, anatomy, and in appropriate complementary areas. COA is a small, private nondepartmental college offering a B.A. in Human Ecology and emphasizing interdisciplinary study, self-governance, and curricular innovations. Doctorate and teaching experience are preferred. Preference may be given to applications received before 21 February. Send application, curriculum vitae and three references to: **Dr. Donald A. Cass, Chairman of Personnel Committee, College of the Atlantic, Bar Harbor, ME 04609.** An Equal Opportunity/Affirmative Action Employer.



**PRESIDENT
NORTH CAROLINA BIOTECHNOLOGY CENTER**

The North Carolina Biotechnology Center was established in 1981 to foster economic development within North Carolina through biotechnology. The Center is a private, non-profit corporation funded largely by the state of North Carolina, which currently appropriates it \$6.5 million per year. The Center furthers Statewide research, university capabilities, and industrial development through grants, collaborative activities, business information, communications, and commercial ventures. No research is undertaken at the Center.

The Center seeks a President to direct a staff of twenty through a growth phase, including construction of a permanent headquarters. The individual will have background and experience appropriate for directing a Statewide endeavor to strengthen university resources, develop commercially sound products, and catalyze industrial growth. Of particular importance is the individual's ability to encourage new biotechnology businesses appropriate to the State's economic and research strengths. In addition to significant administrative abilities, experience with federal and state governments is desirable.

A letter of interest, resume, and salary requirements should be sent by February 20 to
Dr. R.E. Morse • Interim President
North Carolina Biotechnology Center
Box 13547 • Research Triangle Park NC • 27709

**U.S. ARMY SENIOR EXECUTIVE SERVICE POSITION
SCIENTIFIC ADVISER
HEADQUARTERS, US ARMY TRAINING AND DOCTRINE COMMAND (TRADOC)
FORT MONROE, VIRGINIA**

SALARY RANGE: \$61,296 to \$72,300

Serves as Senior Scientist of TRADOC and Scientific Adviser to the Commanding General and his Deputy Chiefs of Staff for Training, Doctrine, and Combat Developments. Gains a general familiarity with AirLand Battle doctrine and understanding of combined arms operations at the tactical and operational levels of war and uses a broad and extensive knowledge of several areas of science and engineering to conduct investigations of importance to the TRADOC mission. Investigations conducted and advice rendered pertain to concepts, doctrine, training, materiel requirements, and force structures that would be useful for the Army of the future. The incumbent evaluates major proposed military systems and concepts and advises on their technical feasibility. Maintains a continuing awareness of latest discoveries, developments, and projects in the world of science by conducting close liaison at highest scientific levels with officials of industry, research foundations, government institutes, and educational institutions; utilizes the highest order of originality and judgment to relate such activities to possible usefulness to doctrine and to meet military requirements through training and combat developments.

Applicants must possess bachelor's degree in physical sciences, engineering or mathematics. Advanced degreed candidates preferred. Applicants should have extensive applicable experience.

For information concerning this position (Announcement No. DA 0487) and the necessary application forms, contact Mrs Jan Lynch, HQ, US Army Materiel Command, AMCPE-CS, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001 or call (202) 274-9415. All forms must be received no later than 16 March 1987.

An Equal Opportunity Employer
US Citizenship Required

MOLECULAR BIOLOGY

At Cetus Corporation, we are committed to maintaining our leading role in the research and development of biotechnology-based products.

We currently seek a Research Assistant/Associate to join our Molecular Biology staff. Responsibilities will include the construction of phage and plasmid cDNA libraries; isolation and analysis of cDNA clones; the use of *in vitro* mutagenesis to construct expression vectors; and the testing of expression vectors.

The successful candidate will possess a related BS/MS plus experience in general molecular biology, including plasmid construction. Experience in cDNA library construction is additionally preferred.

Please send your resume in confidence to:

CETUS CORPORATION
Box JDS
1400 Fifty-third Street
Emeryville, CA 94608

E/O/E



INDUSTRIAL TOXICOLOGIST

At WARNER-LAMBERT, a multinational leader in pharmaceuticals and consumer products, we recognize that each job and every person is essential to our success.

The highly motivated individual we seek will play a key role in developing and implementing new programs in industrial toxicology. Responsibilities will include retrieving and analyzing toxicology information on compounds of interest, as well as participating in designing, monitoring and evaluating toxicology studies carried out at contract laboratories. The ability to assist in the implementation of a computerized data retrieval system is a must. In addition, you will maintain up-to-date information on regulations pertaining to toxic substances as established by OSHA, EPA, NIOSH, DOT, FDA and other agencies.

This position reporting to the Manager, Industrial Toxicology Research requires a Ph.D. in toxicology, pharmacology or a related field with 0-1 year experience. Computer literacy, excellent verbal and written communication skills and the ability to work independently are required.

Qualified candidates should submit resume with salary requirements to: Ms. Robin Bachman, Corporate Human Resources, WARNER-LAMBERT, 201 Tabor Road, Morris Plains, New Jersey 07950.

**WARNER
LAMBERT**

Equal Opportunity In Action

POSITIONS OPEN

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

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

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

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

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

CONFERENCE

THE NEW YORK ACADEMY OF SCIENCES AN INTERNATIONAL ORGANIZATION CONFERENCE ON: IMPACT ON THE FETUS OF PARENTAL SEXUALLY TRANSMITTED DISEASE 28 TO 30 SEPTEMBER 1987 CRYSTAL CITY GATEWAY MARRIOTT, WASHINGTON, DC

Sexually transmitted disease (STD) has increased tenfold in the United States since 1960. The progeny of the infected adults need protection from the sequelae of the adult lifestyle. What is an adult problem frequently becomes a significant and even life-threatening problem for the offspring. This conference will summarize the current state of knowledge and identify the etiologic agents of STD which adversely affect the well-being of the fetus and the neonate.

There will be a contributed poster session. The deadline for submission of abstracts is 1 May 1987. A 200-word summary of work to be presented should be sent to: **Ruth B. Kundsins, Sc.D., Brigham and Women's Hospital, Harvard Medical School, 75 Francis Street, Boston, MA 02115.**

CONFERENCE ORGANIZERS:

Ruth B. Kundsins, Sc.D., Brigham and Women's Hospital, Harvard Medical School, Boston, MA.

Lawrence Falk, Ph.D., Abbott Laboratories, Chicago, IL.

Sally S. Hipp, Ph.D., New York Department of Health, Albany, NY.

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

INTERNSHIPS

ILLINOIS LEGISLATIVE SCIENCE INTERN

Sangamon State University invites applications from graduates (baccalaureate, masters, doctorate) of science or engineering programs for two 10.5-month science internships beginning 1 October 1987 as part of the Illinois Legislative Staff Internship Program. The science interns will be assigned to the Springfield and Chicago Science Offices of the Illinois Legislative Research Unit. The Science Office provides legislators with information and research about policy issues that involve science and technology. As part of the program, the science interns will participate in an academic seminar with other legislative interns. Send curriculum vitae by 1 March 1987 to: **Dr. Kent Redfield, Coordinator, Illinois Legislative Staff Internship Program, Sangamon State University, Springfield, IL 62708.**

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS (M.D. or Ph.D.) for 1 to 3 years in basic vision research. Preceptors: **Bernard Becker, Joel Brown, Ronald Burde, Adolph Cohen, Nigel Daw, Robert Miller, Alan Pearlman.** NIH supported stipends. U.S. citizens or permanent resident status. Starting time negotiable. Research areas include biochemical and electrophysiological studies on photoreceptor transduction; pharmacological and electrophysiological studies on identified retinal neurons relating to transmitter action and receptive field organization; development of visual cortex; the basis of visual deprivation effects on cortical organization; ocular fluid dynamics; the primate pupillary pathway. See any preceptor at ARVO or write for details: **Dr. Adolph Cohen, Ophthalmology, Box 8096, Washington University Medical School, St. Louis, MO 63110. An Affirmative Action/Equal Opportunity Employer.**

FELLOWSHIPS

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

POSTDOCTORAL FELLOWSHIP. The Oregon Regional Primate Research Center (ORPRC) announces availability of a 2-year postdoctoral fellowship (\$18,000 per year plus fringe benefits). Applicants must be U.S. citizens or possess an Alien Registration Receipt Card. Research interests include: atherosclerosis; biochemical, behavioral, cellular, and molecular approaches to the study of reproduction; etiologies of diabetes; and immunology. A formal research application in association with a staff scientist is due by 1 June 1987. A list of scientists and information can be obtained from: **Dr. Harold G. Spies, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006. The ORPRC is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP CARDIOVASCULAR PHARMACOLOGY

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

FELLOWSHIPS

University of California, San Diego, Departments of Medicine and Biology. FELLOWSHIPS IN ENDOCRINOLOGY. Applications are invited from academically oriented Ph.D.'s and M.D.'s for a 2- to 3-year training program of research in the biology of calcium and skeletal metabolism beginning July 1987 and/or January 1988. Applicants must be eligible for NIH training grants. Specific projects include (i) molecular biology of skeletal-acting hormone receptors, (ii) biosynthesis, secretion, and molecular biology of calcitonin and related neuroendocrine factors, (iii) bone matrix proteins and minerals, (iv) gene expression and skeletal differentiation. Send curriculum vitae and two references to: **L. J. Defetos, M.D., San Diego VA Medical Center (V111C), San Diego, CA 92161. An Affirmative Action/Equal Opportunity Employer.**

NIH STAFF FELLOWSHIP/ NIH VISITING FELLOWSHIP MOLECULAR BIOLOGY/GENE THERAPY

The Development and Metabolic Neurology Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invites applications for NIH Staff Fellowship or NIH Visiting Fellowship position. This postdoctoral position is available to study regulation of genes following transfer into cultured cells and whole organisms using retroviral vectors and recombinant adenoviruses. The candidate will be expected to study regulation of human globin and lysosomal enzyme genes. Experience in one of the following areas is highly desirable: eukaryotic molecular biology, hemopoiesis or mouse embryology. For the NIH Staff Fellowship program, candidates must be U.S. citizens or resident aliens and must have a doctoral degree or equivalent. For the NIH Visiting Fellow program, candidates may be resident or nonresident aliens, and must have a doctoral degree, or its equivalent, in a health science field whose relevant postgraduate experience does not exceed 3 years of experience at the time of their entrance on duty.

The positions are located in Bethesda, Maryland. For position information and qualification requirements, candidates may telephone: **Mr. Wallace Holland, Personnel Management Specialist, 301-496-6334.** Interested candidates should send curriculum vitae, a brief statement of research interest and the names of three (3) references to: **Dr. Stefan Karlsson, IRP, DMNB, NINCDS, National Institutes of Health, 9000 Rockville Pike, Building 10, Room 3D04, Bethesda, MD 20892; Telephone: 301-496-3285. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIPS available in neurobiological and behavioral development. The University of Virginia announces a new NICHHD multidisciplinary program.

Training Faculty

N. J. Lenn, M.D., Ph.D.	Synaptic Development
O. Steward, Ph.D.	Neuroplasticity
J. Bennett, M.D., Ph.D.	Neuropharmacology
B. Bertenthal, Ph.D.	Vision Development
P. Brunjes, Ph.D.	Sensory Development
P. Gold, Ph.D.	Regulation of Memory
I. Gottesman, Ph.D.	Genetic Mental Illness
J. Hackett, Ph.D.	Synaptic Transmission
D. Hill, Ph.D.	Sensory Development
P. Lambert, M.D.	Otologic Development
W. Levy, Ph.D.	Synaptic Modification
E. Lothman, M.D., Ph.D.	Physiology of Epilepsy
R. McCarty, Ph.D.	Autonomic Development
D. Mellon, Jr., Ph.D.	Neuromuscular Development
S. Moody, Ph.D.	Neuronal-Axon Development
L. Rebhun, Ph.D.	Cytoskeletal Development
S. Scarr, Ph.D.	Developmental Psychology
W. Turk, M.D.	Neuromuscular Development
J. Tuttle, Ph.D.	Tropic Interactions
G. F. Wooten, M.D.	Neuropharmacology

United States citizenship or permanent residency required. Please send curriculum vitae and description of interests to: **Nicholas J. Lenn, Program Director, Box 394, University of Virginia, Charlottesville, VA 22908.**

MICROBIOLOGY Research & Development

DIFCO Laboratories, a world leader in products for the microbiology laboratory since 1895, seeks scientists/developers for an expanding effort in immunodiagnostics and microbial metabolism at the new, state-of-the-art, research and development facility in Ann Arbor, Michigan.

Scientist/Senior Scientist, Immunodiagnostics

Scientists are sought with backgrounds in virology, immunology or chemistry to direct groups involved in development of rapid infectious disease tests. Experience in assay format and automation is desired. Candidates should have a Ph.D. with 1-6 years of postdoctoral experience.

Scientist/Senior Scientist, Microbial Metabolism

Positions are open for scientists with fundamental training in bacteriology relating to microbial physiology, antibiotic sensitivity testing, or clinical microbiology. Candidates should have a M.S. or Ph.D. with solid training in bacteriology and/or biochemistry.

Difco Laboratories offers a competitive salary in a company poised for substantial growth. Please send your resume and salary requirements to:



Quality Products
for Microbiology

D.J. Schafer
DIFCO LABORATORIES
Research and Development Center
1180 Ellsworth Road
Ann Arbor, MI 48108 USA
EOE M/F

VICE CANCELLOR FOR RESEARCH AND DEAN OF THE GRADUATE COLLEGE

The University of Illinois at Chicago

Nominations and applications are invited for the position of Vice Chancellor for Research and Dean of the Graduate College at the University of Illinois at Chicago.

This position offers the special challenge of fostering new initiatives which will facilitate the campus's continuing development as a major graduate and research university. In addition to providing campus leadership in this regard, specific responsibilities of the position include: the promotion and maintenance of excellence in research and graduate education throughout the campus; the administration of the Graduate College, the Campus Research Board, and various research support units of the Graduate College; the development of public and private sources of support for campus research programs; the development of university-industry relationships consistent with the research mission of the campus, and providing the major point of linkage between the campus and the developing Chicago Technology Park.

Strong preference will be given to individuals with the following qualities:

- an earned doctorate and a record of achievement which would justify an appointment as tenured professor;
- demonstrated deep understanding of the internal and external circumstances in which faculty carry on research and graduate education;
- ability to develop means for enhancing the University of Illinois at Chicago as a major performer of the highest quality graduate education and research;
- evidence of administrative ability and of success in working with agencies which support research, both within and outside the University.

Position available September 1, 1987, or earlier, if desired. Salary negotiable. To ensure full consideration, nominations and applications (including resume) should be submitted by March 13, 1987 to:

Professor Paul Chung, Chair
Search Committee for a Vice Chancellor for Research
and Dean of the Graduate College
c/o Office of the Chancellor
The University of Illinois at Chicago
Box 4348
Chicago, Illinois 60680
Attention: Ms. Linda Cesario (312/996-8364)

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

CIBA-GEIGY is a major pharmaceutical company with an active interest in molecular biology. The company's excellent new research facilities are located in the heart of Basel, northwestern Switzerland. Basel is centrally located in Europe and has a leading molecular biology community. Several

POSTDOCTORAL POSITIONS

are now available for highly motivated Ph.D graduates to join the Molecular Genetics group for periods up to three years.

We are a group of young scientists working on the expression of foreign genes in mammalian cell cultures, the molecular aspects of allergic reactions, and the modulation of macrophage differentiation.

Candidates should preferably have experience in some of the following areas: mRNA isolation, cloning of cDNA and genomic DNA, expression of foreign proteins in pro- and eukaryotic systems, tissue culture.

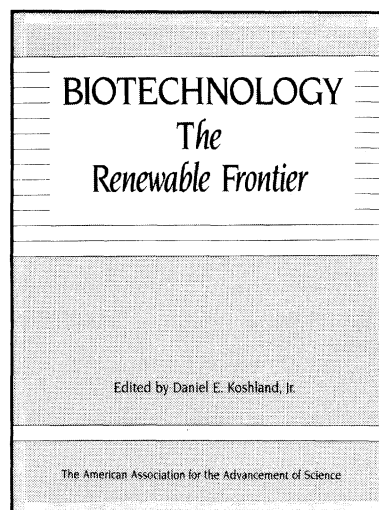
Applications including a summary of background and research interest, curriculum vitae and the names of two references should be sent under Ref. "Science 1043" to Dr. U. Spaeti, CIBA-GEIGY Ltd., Personnel Department, Postfach, CH-4002 Basel, Switzerland.

CIBA—GEIGY

The new frontiers in biology today are the frontiers of biotechnology tomorrow

BIOTECHNOLOGY: The Renewable Frontier

Edited by
Daniel E. Koshland, Jr.
Editor, *Science*



Discoveries in the modern biology laboratory are of great practical importance in industry today, as they have been in medicine for many years. This volume clearly illustrates the extraordinary cross-disciplinary aspects of modern biology and its tremendous impact on the future. Like its 1984 predecessor, this collection presents the latest and most important topics at the forefront of biological research. Compiled from papers in *Science*, 1985.

Contents.

I. New Techniques

In Vitro Mutagenesis
Novel Genomes of Large DNA Viruses
Heterologous Protein Secretion from Yeast
Genetic Linkage Map of the Human X Chromosome
Protein Insertion into & Across Membranes

II. Immunology

Transfectomas to Novel Chimeric Antibodies
Histocompatibility Antigens on Murine Tumors
Factors in Protein Antigenic Structure

III. Developmental Biology and Cancer

Spatially Regulated Expression of Homeotic Genes
in *Drosophila*
Plasticity of the Differentiated State
Oncogenes in the Cytoplasm & Nucleus
Granulocyte-Macrophage Colony-Stimulating Factors
X-Ray Structure of Displatin with DNA
Immunoglobulin Heavy-Chain Enhancer:
Tissue-Specific Factors

IV. Hormones and Metabolism

Atrial Natriuretic Factor
The LDL Receptor Gene
Human von Willebrand Factor

V. Biotechnology

Biotechnology & Food
Drug Biotechnology: The Japanese Challenge

VI. Virology

Nucleotide Sequence of Yellow Fever Virus
Three-Dimensional Structure of Poliovirus

VII. Plant Sciences

Arabidopsis thaliana & Molecular Genetics
Safety & Genetic Engineering in Agriculture

VIII. Behavior and Sensory Phenomena

The Cellular Basis of Hearing
Insect Colony Sociogenesis
Neurotrophic Factors

1986; 400 pp., comprehensive index, 125 illustrations and tables

Hardcover \$29.95; AAAS members \$23.95 ISBN 0-87168-314-7

Softcover \$17.95; AAAS members \$14.35 ISBN 0-07168-283-4

VISA, MasterCard, and Choice accepted; include account number, expiration date, and signature. Order from American Association for the Advancement of Science, Marketing, Dept. F, 1333 H Street, NW, Washington, DC 20005. Please add \$1.50 postage and handling per order. Allow 4–6 weeks for delivery.