

Such a review is now available in the present volume. The editors have assembled eight clear and concise papers by some of the leaders in the study of metamorphic fluids that present a well-balanced variety of viewpoints; as the editors state in the preface, "A cursory examination of the volume will reveal that there are widely divergent opinions on the compositions of metamorphic fluids and on the ways in which they interact . . . with the rocks through which they pass. . . . We leave the reader to determine his own brand of 'truth.'"

Three main topics are covered by the papers in this book: fluid compositions (M. L. Crawford and L. S. Hollister; B. Newton), evidence for fluid flow and techniques for calculating fluid-rock ratios (J. M. Ferry; B. J. Wood and J. V. Walther; B. W. D. Yardley; R. T. Gregory), and mineral-fluid reaction mechanisms and rates (J. Ridley and A. B. Thompson; J. V. Walther and B. J. Wood). Each of the papers begins with development of the necessary theory and ends with case studies or insightful back-of-the-envelope type calculations; the papers are uniformly well written.

Some of the highlights of the book include a lengthy discussion by Crawford and Hollister on fluid immiscibility and the different physical properties of coexisting CO₂- and H₂O-rich fluids; continuing debate between Ferry on the one hand and Wood and Walther on the other over the meaning of calculated, time-integrated fluid-rock ratios; and discussions by Wood and Walther and by Yardley on mechanisms of fluid flow in regions where fluid pressure is much greater than hydrostatic pressure. The chapters that are least successful, to my mind, are those by Gregory and by Ridley and Thompson. In the former case, I found the chapter, which deals with evidence from Precambrian iron formations, to be *too* concise and hence somewhat difficult to follow, despite some interesting conclusions. The latter paper contains an excellent discussion of mineral kinetics, but any correlation between kinetics and the role of a fluid phase is left to the reader's imagination. These were only minor disappointments, however.

Overall, this book is a fine and up-to-date (references through 1985) review of research on fluid-rock interactions. Although the focus is on the role of fluids in metamorphic processes, I would recommend it to anyone concerned with understanding the physical and chemical processes of fluid flow and fluid-rock interactions.

JANE SILVERSTONE
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Some Other Books of Interest

Thermophiles. General, Molecular, and Applied Microbiology. THOMAS D. BROCK, Ed. Wiley-Interscience, New York, 1986. xii, 316 pp., illus. \$47.50. Wiley Series in Ecological and Applied Microbiology.

Thermophilic microorganisms, the editor of this volume writes in his preface, are of interest both because of their potential biotechnological applications and for the basic biological questions their tolerance for high temperatures poses. The purpose of the present book is to "present the current status and future direction" of fundamental and applied research on these microorganisms. An introductory chapter in which Brock presents a taxonomic and ecological overview of thermophiles is followed by a chapter on methods for their isolation and study by Wiegell. Stetter then provides a genus-by-genus summary of archaeobacterial extreme thermophiles from volcanic areas. Physiology and growth (Sundaram) and membranes and lipids (Langworthy and Pond) of thermophiles are then reviewed. Next, Oshima presents a selective review of biochemical studies of the genetic apparatus of extreme thermophiles, which is followed by accounts of the applied genetics of aerobic (Imanaka and Aiba) and anaerobic (Béguin and Millet) thermophiles. The volume concludes with chapters on industrial applications of thermostable enzymes (Ng and Kenealy) and on the use of thermophiles in the production of fuels and chemicals (Weimer), in wastewater treatment (Zinder), and in recovery of metal from ore and mineral waste (Brierley and Brierley). A subject index is appended.—K.L.

Evolution of Animal Behavior. Paleontological and Field Approaches. MATTHEW H. NITECKI and JENNIFER A. KITCHELL, Eds. Oxford University Press, New York, 1986. viii, 184 pp., illus. \$35. From a symposium, Chicago, May 1984.

This volume consists of papers originally presented at the Field Museum's seventh Spring Systematics Symposium. The opening section, headed Historical Approaches to the Evolution of Behavior, begins with a consideration by George Lauder of the concepts of homology and analogy as applied to behavior that includes by way of example a case study of motor patterns of feeding behavior in the sunfish. There follow two papers concerned with evidence from the fossil record bearing on possible social behavior in dinosaurs (John Ostrom) and on feeding behavior in sediment-dwelling marine invertebrates (Adolf Seilacher). In a fourth paper Jennifer Kitchell considers fac-

tors affecting the evolution of the behavior of naticid gastropods and their molluscan prey. A second section, Field and Experimental Approaches to the Evolution of Behavior, consists of papers on parental investment in offspring as related to sexual selection (Randy Thornhill), cooperative breeding in New World jays (John W. Fitzpatrick and Glen E. Woolfenden), and parent-offspring interactions in anthropoid primates (Jeanne Altmann). The contributions are preceded by a general introduction by the editors, and an index concludes the volume.—K.L.

Books Received

The Concise Natural History of New Zealand. Harriet Fleet. Heinemann, Auckland, New Zealand, 1986 (U.S. distributor, ISBS, Portland, OR). xviii, 275 pp., illus., + plates. \$19.95.

Contemporary Classics in Clinical Medicine. James T. Barrett, Ed. ISI Press, Philadelphia, 1986. xvi, 390 pp. \$39.95. Contemporary Classics in Science.

Contextualism and Understanding in Behavioral Science. Implications for Research and Theory. Ralph L. Rosnow and Marianne Georgoudi, Eds. Praeger, New York, 1986. xiv, 379 pp. \$49.95.

Control Applications of Nonlinear Programming and Optimization. G. Di Pillo, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1986. x, 210 pp., illus. \$58. From a workshop, Capri, Italy, June 1985.

Culture, Society, and Menstruation. Virginia L. Olesen and Nancy Fugate Woods, Eds. Hemisphere (Harper and Row), New York, 1986. xiv, 186 pp., illus. \$29.95. A Health Care for Women International Publication.

Estuarine and Coastal Pollution. Detection, Research and Control. D. S. Moulder and P. Williamson *et al.*, Eds. Pergamon, New York, 1986. xvi, 364 pp., illus. Paper, \$95. Water Science and Technology, vol. 18, no. 4/5. From a conference, Plymouth, UK, July 1985.

Evaluation of Pesticides in Ground Water. Willa Y. Garner, Richard C. Honeycutt, and Herbert N. Nigbs, Eds. American Chemical Society, Washington, DC, 1986. x, 573 pp., illus. \$94.95. ACS Symposium Series, 315. Based on a symposium, Miami Beach, FL, April 1985.

Exploring the Concept of Mind. Richard M. Caplan, Ed. University of Iowa Press, Iowa City, 1986. x, 150 pp., illus. \$15.95.

The Facts on File Dictionary of Science. E. B. Uvarov and Alan Isaacs. 6th ed. Facts on File, New York, 1986. viii, 468 pp., illus. \$21.95. Hardcover ed. of *The Penguin Dictionary of Science*.

Fast Electrical and Optical Measurements. James E. Thompson and Lawrence H. Luessen *et al.*, Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Hingham, MA). 2 vols. Vol. 1, Current and Voltage Measurements. xii pp. + pp. 1-593, illus., + index. \$120.50. Vol. 2, Optical Measurements. xii pp. + pp. 594-1060, illus., + index. \$98.50. NATO Advanced Science Institutes Series E, vols. 108 and 109. From an institute, I. Giocco, Castelvecchio Pascoli, Italy, July 1983.

Few-Body Problems. E. Hadjimichael and W. Oelert. World Scientific, Philadelphia, 1986. viii, 399 pp., illus. \$51; paper, \$33. International Review of Nuclear Physics, vol. 3.

Field Measurement of Dinitrogen Fixation and Denitrification. R. D. Hauck and R. W. Weaver. Soil Science Society of America, Madison, WI, 1986. x, 115 pp., illus. Paper, \$18; members' first copy, \$15. SSSA Special Publication, no. 18. From a symposium, Washington, DC, Aug. 1983.

Hyperbolic Partial Differential Equations 3. Matthew Witten, Ed. Pergamon, New York, 1986. x pp. + pp. 377-632, illus., + index. \$64. International Series in Modern Applied Mathematics and Computer Science, vol. 12. *Computers and Mathematics with Applications*, vol. 12A, nos. 4/5.

The Illustrated Naked Ape. A Zoologist's Study of

the Human Animal. Desmond Morris. Crown, New York, 1986. 176 pp. \$19.95. Augmented reprint, 1967.

Immunocytochemical Technology. Gwen V. Childs, Ed. Liss, New York, 1986. viii pp. + pp. 125-411, illus. \$60. Also published as the *American Journal of Anatomy*, vol. 175, no. 2/3.

In Search of the Double Helix. Quantum Physics and Life. John Gribbin. McGraw-Hill, New York, 1985. viii, 369 pp., illus. \$17.95.

Intelligent Machinery. Theory and Practice. Ian Benson, Ed. Illustrated by Benny Kandler. Cambridge University Press, New York, 1986. xii, 168 pp. \$34.50. From a conference, Cambridge, UK, Sept. 1984.

Mechanisms of DNA Damage and Repair. Implications for Carcinogenesis and Risk Assessment. Michael G. Simic, Lawrence Grossman, and Arthur C. Upton, Eds. Plenum, New York, 1986. xvi, 578 pp., illus. \$89.50. Basic Life Sciences, vol. 38. From a symposium, Gaithersburg, MD, June 1985.

Membrane Receptors and Enzymes as Targets of Insecticidal Action. J. Marshall Clark and Fumio Matsumura, Eds. Plenum, New York, 1986. x, 256 pp., illus. \$49.50. From a symposium, Hamburg, FRG, Aug. 1984.

Mendelian Inheritance in Man. Catalogs of Autosomal Dominant, Autosomal Recessive, and X-Linked Phenotypes. Victor A. McKusick. 7th ed. Johns Hopkins University Press, Baltimore, 1986. lxxviii, 1741 pp. \$75.

Methods of Laser Spectroscopy. Yehiam Prior, Abraham Ben-Reuven, and Michael Rosenbluh, Eds. Plenum, New York, 1986. xiv, 496 pp., illus. \$79.50. From a symposium, Ein Bokek, Israel, Dec. 1985.

Microcomputer Applications in Geology. J. Thomas Hanley and Daniel F. Merriam, Eds. Pergamon, New York, 1986. xvi, 258 pp., illus. \$37.50. Computers and Geology, vol. 5.

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Modeling and Analysis of Conventional Defense in Europe. Assessment of Improvement Options. Reinert K. Huber, Ed. Plenum, New York, 1986. viii, 215 pp., illus. \$45. From a workshop, Bonn/Bad Godesberg, FRG, Dec. 1984.

Modern Statistical Methods in Chronic Disease Epidemiology. Suresh H. Moolgavkar and Ross L. Prentice, Eds. Wiley-Interscience, New York, 1986. xvi, 282 pp., illus. \$32.50. From a conference, Alta, UT, 1985.

The Molecular Biology of Physarum polycephalum. William F. Dove et al., Eds. Plenum, New York, 1986. x, 368 pp., illus. \$59.50. NATO Advanced Science Institutes Series A, vol. 106. From a workshop, Madison, WI, July 1985.

Molecular Electronics. Beyond the Silicon Chip. M. Todd Jarvis. 2nd ed. Technical Insights, Fort Lee, NJ, 1985 (available from SEAI Technical Publications, Madison, GA). v, 148 pp., illus. Paper, \$390. Emerging Technologies, no. 9.

Non-Linear Vibrations. G. Schmidt and A. Tondl. Cambridge University Press, New York, 1986. 420 pp., illus. \$59.95.

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Pesticides in Soil. Sarina Saltzman and Bruno Yaron, Eds. Van Nostrand Reinhold, New York, 1986. xx, 379 pp., illus. \$57.95. A Hutchinson Ross Publication. Van Nostrand Reinhold Soil Science Series.

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Physical Problems in Microelectronics. J. Kassabov, Ed. World Scientific, Singapore, 1985 (U.S. distributor, Taylor and Francis, Philadelphia). x, 639 pp., illus. \$60. From a school, Varna, Bulgaria, May 1985.

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Physics of Shallow Estuaries and Bays. J. van de Kreeke, Ed. Springer-Verlag, New York, 1986. x, 280 pp., illus. Paper, \$24.50. Lecture Notes on Coastal and Estuarine Studies, vol. 16. From a symposium, Miami, Aug. 1984.

The Politics and Rhetoric of Scientific Method. Historical Studies. John A. Schuster and Richard R. Yeo, Eds. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Hingham, MA). xl, 305 pp., illus. \$65.50. Australasian Studies in History and Philosophy of Science, vol. 4.

Power, Autonomy, Utopia. New Approaches toward Complex Systems. Robert Trappl, Ed. Plenum, New York, 1986. viii, 167 pp., illus. \$39.50. Based on two meetings, Vienna.

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The Problems of Chemistry. W. Graham Richards. Oxford University Press, New York, 1986. viii, 104 pp., illus. \$24.95; paper, \$8.95. An OPU Book.

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The Twin Dimensions. Inventing Time and Space. Géza Szamosi. McGraw-Hill, New York, 1986. viii, 289 pp., illus. \$15.95.

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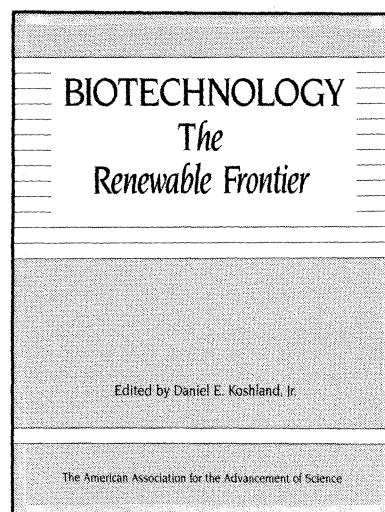
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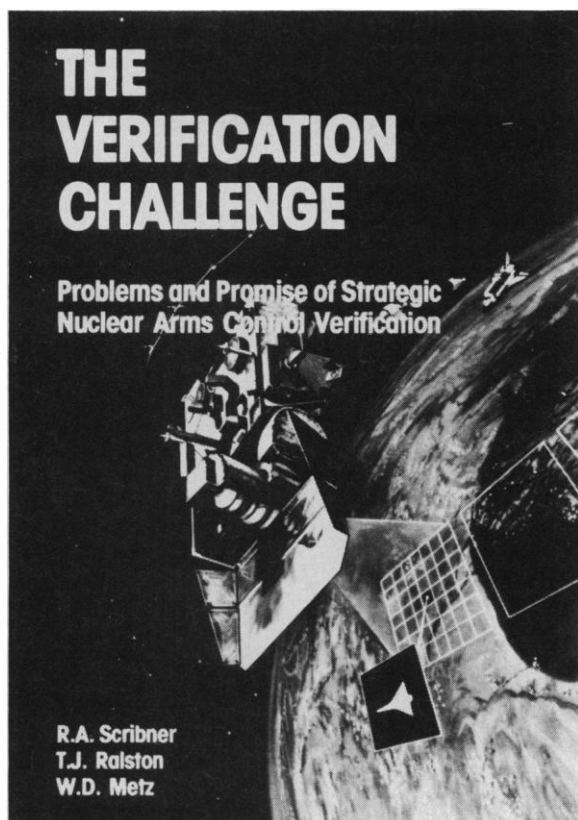
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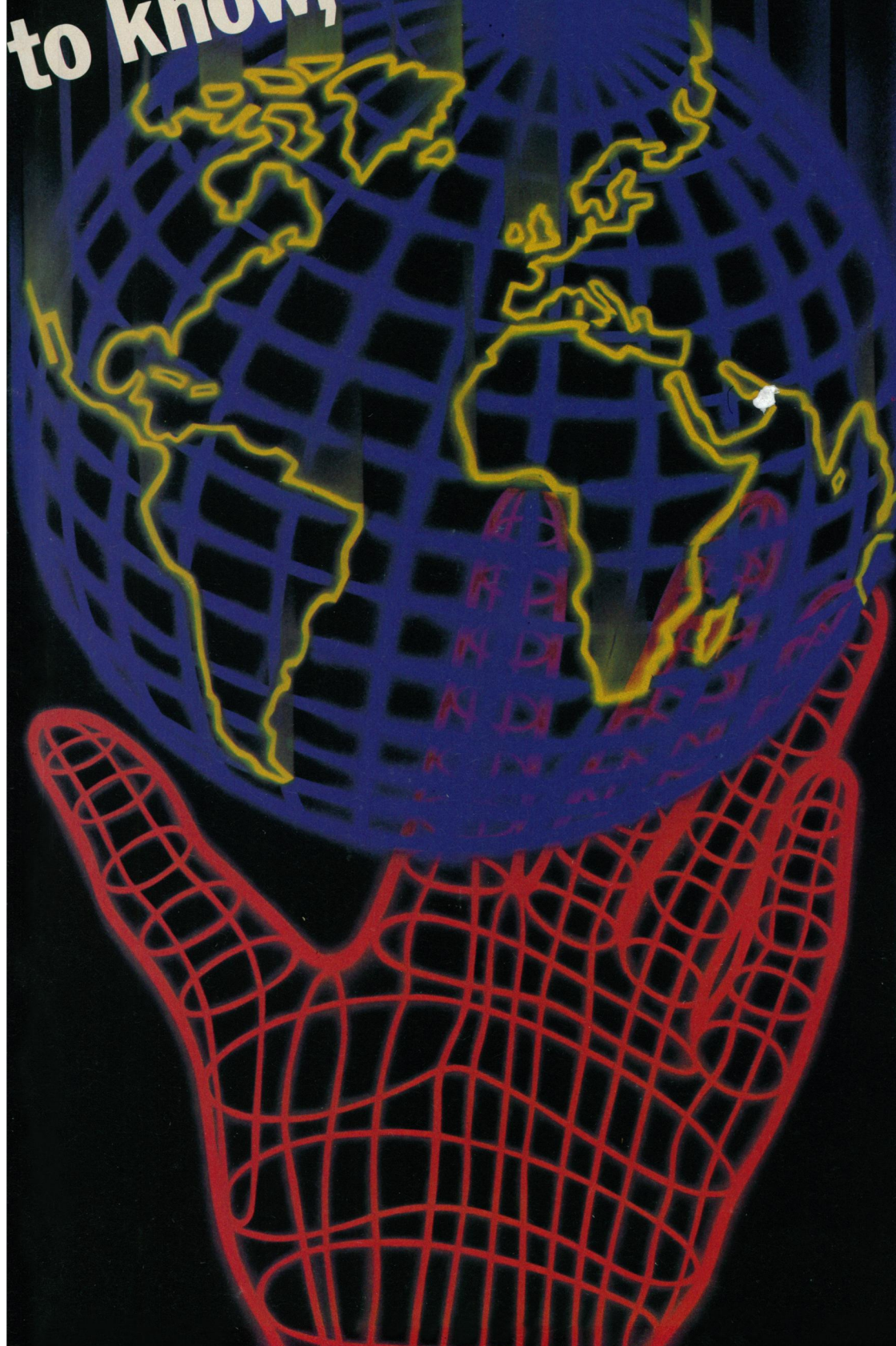
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Scientific Organization: G.P. Trentini (I), A. Oksche (D) and P. Pévet (F)

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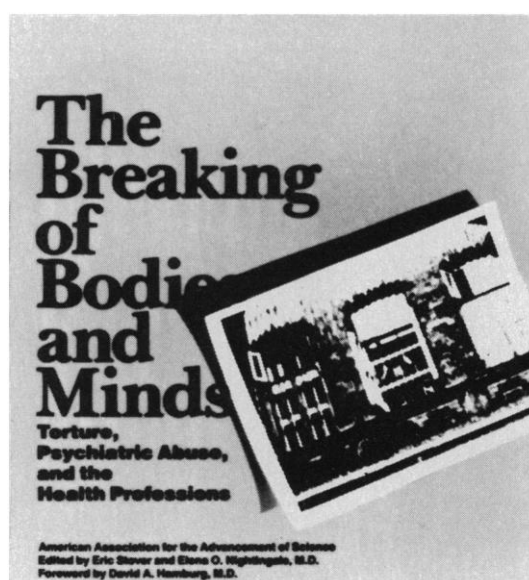
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Torture, Psychiatric Abuse, and the Health Professions

A documentation of systematic use and effects of physical and mental torture throughout the world

Edited by Eric Stover
and Elena O. Nightingale
With a Foreword by
David A. Hamburg



This eye-opening book brings together for the first time writings on the role of medical personnel in cases of torture and psychiatric abuse. Through analyses and case histories, psychiatrists and other health care professionals, political scientists, ethicists, and other writers discuss the systematic use and effects of physical and mental torture in the Soviet Union, Latin America, and other parts of the world.

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The Breaking of Bodies and Minds is important reading for anyone concerned with the preservation of basic human rights.

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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:
21 November issue (mailed 14 November): **31 October**
28 November issue (mailed 21 November): **7 November**
5 December issue (mailed 28 November): **14 November**
12 December issue (mailed 5 December): **20 November**

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 DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$13.00 per millimeter; \$325 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) 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

Cell Biologist/Microbiologist (Ph.D.). Ten years of teaching and research experience at excellent university. Presently employed in research institute doing basic cell biology. Well-informed and current in modern biology with an appreciation and interest in most facets of biology. Prior teaching experience: cell biology, molecular biology, biochemistry, microbiology, and virology. Eager to return to teaching or teaching/research position where quality teaching is valued. Box 180, *SCIENCE*.
10/31; 11/7

Cytogeneticist/Cell Biologist, Ph.D. Background in mammalian cytogenetics and evolutionary biology. Six years of research experience in designing mutagen susceptibility assays, adapting and using immunofluorescence techniques for multiple antigens and cell types. Experience in statistical analysis, computer simulation, cell photography, and image analysis. Teaching experience in cell biology and genetics. Sixteen papers in referred journals. Seeks research/teaching position in academia/industry. Geographic preference sunbelt, west coast. Box 188, *SCIENCE* X

Earth/Space Science Instructor. Experience primarily at community college level. Have also taught high school chemistry and physics. Currently in Baltimore/Washington area, but willing to relocate. References available on request. Box 184, *SCIENCE*. X

Environmental/Soil Organic Chemist. Training in characterization and adsorption study of farm wastes. Experienced in pesticide residue analysis of agricultural commodities. Soil testing and plant analysis. Postdoctoral and supervisory experience. Experienced with GC, GPC, AA, and wet methods. Box 144, *SCIENCE*. X

POSITIONS WANTED

Immunochemist, Ph.D. Extensive experience in protein isolation, purification, and characterization, including solid state peptide sequencing. Seeks research position. Box 173, *SCIENCE*. X

Industrial Microbiologist. Microbiology Ph.D. Five years of fermentation process R&D experience, large-scale mammalian cell culture, industrial-scale production of specialty biologicals, and production of mammalian gene products from genetically engineered hosts. Experienced in bulk pharmaceutical production (tissue plasminogen activators, lymphokines) under GMP. NIH grant-supported academic research experience. Many first-authored publications in molecular biology. Seek challenging position in pharmaceutical/biotechnology industry. Box 190, *SCIENCE*. X

Light/Electron Microscopist. More than 15 years of experience in histology, SEM and LEM, including DNA spreading and ultrathin sectioning; excellent references. Seeks position in Boston area for 1987. Box 186, *SCIENCE*.
10/31; 11/7, 14, 21

Oceanographer, Ph.D. with 25 years of planning, directing, and executing laboratory and field studies in both marine and freshwater nutrient chemistry, plankton and fisheries, plus teaching and administration experience, seeks research/teaching position in academia/industry. Box 181, *SCIENCE*. X

Ph.D. Many years of research experience. Bio/neurochemist; cell culture. Seeks temporary/permanent position. Box 183, *SCIENCE*. X

Research and Quality Assurance Executive. Ph.D. (biophysics), M.B.A., M. bioradiology, and BSEE. Experienced, creative technical and managerial problem solver seeks challenging opportunity with achievement-oriented organization. Bob Richards, 5705 Blue Sage Dr., Littleton, CO 80123. Telephone: 303-795-8823. X

Retrovirologist Ph.D. AIDS researcher with publications and teaching experience. Cell biologist with some molecular biology experience. Innovative scientist experienced in laboratory management, cell-virus culture, serology, viral proteins, Southern blot analysis, and antiviral agents. Seeks academic/industrial research position. Box 189, *SCIENCE*.
10/31; 11/7

Zoologist/Anatomist, Ph.D. Broad background; experienced, innovative teacher; some administrative experience. Preference: small college teaching. Box 187, *SCIENCE*.
10/31; 11/7, 14

POSITIONS OPEN

ACADEMIC GASTROENTEROLOGISTS

Applications are invited for two positions in the **Division of Gastroenterology of the Department of Internal Medicine, College of Medicine, The Ohio State University**. The division is seeking clinician scientists to participate in an expanding multidisciplinary program in digestive diseases research. Acceptable candidates will be Board-certified/-eligible in gastroenterology and demonstrate commitment to academic excellence in this subspecialty. Responsibilities are patient care, teaching, and research, with major emphasis on the latter. Appointment will be at the rank of assistant or associate professor commensurate with academic experience, scientific productivity, and currently funded research. Submit letters of application, summary of research interests, clinical qualifications, curriculum vitae, and names of four references by 2 February 1987 to: **J. D. Wood, Ph.D., Chairman, GI Search Committee, Department of Physiology, 4196 Graves Hall, 333 West 10 Avenue, Columbus, OH 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.**

University of Texas Health Science Center at Dallas (UTHSCD) is seeking a psychiatrist for inpatient services at affiliated hospital. Position includes academic post at **ASSISTANT OR ASSOCIATE** level. Will have teaching responsibilities and must have research interest. Excellent fringe benefits. Send curriculum vitae to: **A. J. Rush, M.D., UTHSCD, 5323 Harry Hines, Dallas, TX 75235. An Equal Opportunity Employment University.**

POSITIONS OPEN

ANATOMY FACULTY POSITION

Ph.D. or equivalent. Anatomist to teach neuroanatomy and assist in teaching gross anatomy to first-year medical students. Primary interest should be in developing teaching excellence. Development of a research program with eventual independent funding is encouraged. Research interests are open. Salary commensurate with qualifications and rank. Send curriculum vitae and three references by **15 November 1986** to:

Dr. Tage Kvist
Assistant Dean for Basic Sciences
Department of Anatomy
Philadelphia College of Osteopathic Medicine
(PCOM)
4150 City Avenue
Philadelphia, PA 19131

Starting date as early as 1 January 1987. *PCOM is an Equal Opportunity Employer*

ASSISTANT PROFESSOR: Applications are invited for a position at the level of assistant professor (tenure-track) in the Department of Chemistry at Stanford University with primary research and teaching interests in inorganic or theoretical chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching undergraduates, as well as graduates. In applying, send curriculum vitae, list of publications, a brief statement of research interests (three pages or less) and, in addition, have three letters of recommendation sent to: **Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305. Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications.** Applications should be received by 15 November 1986.

BIOCHEMISTRY—Tenure-track, ASSISTANT OR ASSOCIATE PROFESSOR position beginning 1 September 1987. Primary faculty member to implement new program in biochemistry. Responsible for introductory and advanced biochemistry courses including biochemistry laboratory. Assist in teaching other courses in the chemistry and/or biology department depending upon areas of specific interest or expertise and conduct undergraduate research. Ph.D. in biochemistry/molecular biology with strong interest in high quality undergraduate teaching. Rank and salary negotiable. Applications and résumés with listing of at least three references should be submitted by 1 January 1987 to: **Dr. Byron Hawbecker, Chemistry Department Chairman, Ohio Northern University, Ada, OH 45810. Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF SASKATCHEWAN ASSISTANT PROFESSOR

Applications are invited for a tenure-stream position at the assistant professor level in the area of molecular genetics.

Candidates should have a Ph.D. degree and, preferably, additional research experience in recombinant DNA techniques. Capability in the field of control of gene expression and gene transfer is essential. Preference may be given to candidates with a strong background in plant molecular biology.

The post will take effect on 1 July 1987, or earlier, if a suitable candidate is found. Send curriculum vitae and the names, addresses, and telephone numbers of at least three references to: **Dr. John King, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0.**

The closing date is 31 December 1986, or thereafter until the position is filled.

CHILD PSYCHIATRIST for full-time academic position in well-established psychiatry department. Must be Board-eligible in child and adult psychiatry. Applicant will serve as assistant director of child and adolescent psychiatric inpatient unit, will have teaching responsibilities, and will be responsible for developing an outpatient component for the inpatient unit. Special research interest in biological aspects of affective and/or eating disorders preferred. Send curriculum vitae to: **David Waller, M.D., University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, TX 75235. An Equal Employment Opportunity University.**

POSITIONS OPEN

COLBY COLLEGE, WATERVILLE, MAINE, DEPARTMENT OF BIOLOGY invites applications for a **Tenure-Track Position** at the level of **ASSISTANT PROFESSOR**, beginning September 1987. A Ph.D. and a strong commitment to undergraduate education are required. Broad training and interests in the biological sciences, familiarity with liberal arts colleges, teaching experience, and/or postdoctoral training are desirable. Candidates should have a demonstrated interest and experience in the study of organismic phenomena in eukaryotes using cellular and/or molecular methods of analysis. Possible areas of expertise which might be useful to the department include developmental biology, endocrinology, functional anatomy, and immunology. Responsibilities may include teaching in part of the department's core curriculum, in advanced courses in the successful candidate's areas of specialization, in courses for nonmajors, and in the departmental seminar for biology majors. An active research program, including supervision of undergraduate research will also be expected. Submit letter of application, curriculum vitae, reprints, and transcripts of undergraduate and graduate records, and have three letters of reference sent to: **Dr. Arthur K. Champlin, Chairman, Department of Biology, Colby College, Waterville, ME 04901**. Completed applications should be received by 15 December 1986. *Colby College is an Affirmative Action/Equal Opportunity Employer.*

University of California, Davis, Department of Chemistry invites applications for a tenure-track position as **ASSISTANT PROFESSOR IN INORGANIC CHEMISTRY** beginning fall 1987. The successful candidate will show exceptional promise for developing an active, independent research program and also for teaching. Preference will be given to candidates whose research interests lie in areas which complement those of present faculty with interests in materials research being particularly attractive. Persons interested in applying should send curriculum vitae (including a list of publications and a summary of their research objectives) and arrange to have three letters of recommendation sent to: **Professor A. L. Balch, Faculty Recruitment Committee (Inorganic), Department of Chemistry, University of California, Davis, CA 95616**. The deadline for receipt of applications is 8 December 1986. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR EUKARYOTIC MOLECULAR GENETICS

The School of Biological Sciences of the University of Nebraska-Lincoln invites applications for a tenure-track faculty position as an assistant professor. The candidate is expected to develop an extramurally funded research program. Collaborative interaction with others on the faculty of the school is encouraged. Preference will be given to candidates with a record of excellence as an independent researcher. Direction of doctoral students and participation in the graduate and undergraduate teaching programs of the school is expected. Candidates must possess the Ph.D. and have a successful postdoctoral experience. The specific system under study should address questions critical to eukaryotic molecular biology. Send résumé, statement of research interest, and three references by 15 December, or until a suitable candidate applies thereafter to: **Dr. R. H. Meints, Search Committee, Molecular Genetics, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, NE 68588-0118**. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSORSHIPS

Applications are invited for assistant professorships in any field of chemistry, including organic, inorganic, physical, structural, theoretical, biological, or solid state. Applicants should arrange to have three letters of recommendation sent independently and should include curriculum vitae and a short statement of research interests. *Harvard University is an Affirmative Action/Equal Opportunity Employer. Applications from female and minority group members are welcome.* Applications and supporting material should be sent no later than 30 November 1986 to: **Chairman, Search Committee, Office of the Director, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138**.

POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR BIOLOGY/GENETICS

The Department of Microbiology, Louisiana State University, Baton Rouge, LA, as part of an expansion program, invites applications for tenure-track positions, rank open, with preference at the assistant professor level. Candidates must have postdoctoral experience, strong credentials in microbiology and/or molecular biology/genetics, and a commitment to establish a research program in either (i) gene expression or genome organization in microorganisms or (ii) microbial physiology. Review of applicants will begin on 1 December 1986. Send curriculum vitae, a description of future research plans, and a list of three references to: **Search Committee, Department of Microbiology, 508 Life Sciences Building, Louisiana State University, Baton Rouge, LA 70803**. *LSU is an Equal Opportunity/Affirmative Action Employer.*

Search extended—**ASSISTANT PROFESSOR—Botany/Biology Department, North Dakota State University (NDSU)** invites applications for a 9-month, tenure-track position in **PLANT MOLECULAR BIOLOGY**. Responsibilities will include the development of a creative and vigorous research program leading to publications and extramural funding and participation in undergraduate and graduate teaching programs. Preference will be given to candidates who can document abilities in molecular approaches to research in interspecies gene transfer or gene regulation. Teaching assignments could include developmental, molecular, or plant physiology courses. Candidates must have a Ph.D. degree; teaching, and/or postdoctoral experience is desirable. Applications should include curriculum vitae and a statement of teaching philosophy and research goals. Send application and make arrangements to have three letters of recommendation sent to: **Dr. Donald S. Galitz, Botany/Biology Department, North Dakota State University, Fargo, ND 58105**, by 1 December 1986. *NDSU is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR/TENURE-TRACK DEPARTMENT OF PHYSIOLOGY AND DALTON RESEARCH CENTER UNIVERSITY OF MISSOURI

We are seeking an individual with an active research program in cellular and molecular biology of vascular tissues. Expertise is needed in establishing a facility to culture endothelial and smooth muscle cells, as well as the ability to interact with cardiovascular investigators. We currently have active programs in coronary collateralization, bioinstrumentation, ion channel analyses, ion transport receptor coupling, nucleotide metabolism, endocrine control, and regulation of single capillaries. Start-up funds, space, and salary will be competitive. Send curriculum vitae and names of three references by 30 November 1986 to: **Dr. Allan Jones, Chairman, Department of Physiology, MA415 Medical Sciences Building, University of Missouri, Columbia, MO 65212**.

The University of Missouri is an Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSOR PHARMACOLOGY

The Department of Pharmacology and Toxicology at the Indiana University School of Medicine invites applications for a tenure-track position at the assistant/associate professor level starting as early as 1 January 1987. Candidates should have the Ph.D. in pharmacology or a related discipline. Individuals with research interests and background which involve either a molecular biological orientation or pharmacology of clinically used anesthetics are preferred, but outstanding applicants working in other areas are encouraged to apply. Applicants with an appropriate background may be eligible for a secondary appointment in the Department of Anesthesia. The successful candidate should have a strong potential to develop an independent research program and secure extramural funding, and a commitment to teaching at the graduate/professional level. Interested individuals should send curriculum vitae and references by 21 November 1986 to: **Dr. Joseph A. DiMicco, Search/Screen Committee Chairman, Department of Pharmacology and Toxicology, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, IN 46223**. *Indiana University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT RESEARCH PHYSIOLOGIST POSITION

The Departments of Physiology and Anatomy, University of California, Los Angeles (UCLA) require a postdoctoral trainee in cardiovascular research with special emphasis on studies of basic cellular and subcellular mechanisms such as muscle excitation-contraction coupling, crossbridge kinetics and single fiber ATPase studies, and cell communication through gap junction. The purpose of this training is to equip applicants (with medical or doctoral degrees) with a critical scientific approach, and state-of-the-art technical skills in any of these areas of research. The group consists of **Drs. J. Vergara, and E. Homsher**, Department of Physiology, and **Dr. G. Zampighi**, Department of Anatomy. Position available 1 March 1987. Stipend—\$17,000 to 19,000 per year. Applicants should send curriculum vitae, including names of those who may be contacted for reference to: **Dr. Julio Vergara, Department of Physiology, UCLA 1439-A Jerry Lewis Neuromuscular Research Center, Los Angeles, CA 90024**.

The University is an Equal Opportunity/Affirmative Action Employer.

BEHAVIORAL NEUROBIOLOGIST, Harvard Medical School, Laboratory of Neurophysiology. Two-year funded position open to applicants with experience in extracellular microelectrode recording. Ongoing research project focuses upon cellular basis of sleep cycle control in the pontine brain stem of cats. Areas of investigation include long-term recording from raphe neurons, and PGO burst cells. Involves collaboration with neuropharmacology team. Special consideration will be given to candidates with a strong technical background in neurophysiology, neuroanatomy, and computer programming who are seeking a postdoctoral opportunity, or a junior faculty position. Send letter of interest and curriculum vitae to: **Dr. J. Allan Hobson, 74 Fenwood Road, Boston, MA 02115**. *Harvard University is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTS

Tenure-track faculty positions at all ranks. Candidates should be interested in developing strong and independent research with long-term growth potential. Teaching includes medical, dental, and graduate students at a sizable medical complex. Biochemistry Department with excellent new facilities is undergoing substantial expansion. Salary commensurate with experience and competitive. Curriculum vitae, brief statement of present and future research interests, and three letters of recommendation should be sent to: **Dr. Robert D. Wells, Chairman, Department of Biochemistry, The University of Alabama at Birmingham, Schools of Medicine and Dentistry, University Station, Birmingham, AL 35294**. *An Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST-ASSISTANT PROFESSOR, Department of Chemistry. Tenure-track opening starting September 1987. Position requires Ph.D.; postdoctoral research and teaching experience desirable. Candidate will teach graduate and undergraduate biochemistry. Position requires an active research program, and vigorous pursuit of external funding. Buffalo State College (called "One of America's Best" by *U.S. News and World Report*) has an 11-member ACS approved department, and is an *Affirmative Action/Equal Employment Opportunity Employer*. Send curriculum vitae, transcripts, three letters of recommendation, and research plans to: **Dr. E. M. Schulman, Department of Chemistry, State University College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222**, by 15 December 1986.

BIOLOGY: Research associate needed to study snake venom proteins. Project will focus on the production of monoclonal antibodies and antigenic relationships of various venom.

Applicants should have an M.A. degree, Ph.D., or B.A. with extensive experience in protein purification and characterization. Previous hybridoma experience is also desired.

The starting date is 1 January 1987 and the salary is \$20,000.

Send curriculum vitae and three letters of reference to: **Dr. John C. Perez, Biology Department, Texas A&I University, Campus Box 158, Kingsville, TX 78363**. *Affirmative Action/Equal Opportunity Employer.*

An *Uncommon* Opportunity

RESEARCH IMMUNOLOGIST

Marion Laboratories, Inc. is an "uncommon company," a leader in the rapidly expanding, high technology segment of the health care industry. We currently have a position available in our Diagnostic Affairs Department within the R&D Division for an experienced Research Immunologist. This key position will be located in Kansas City, MO.

Primary responsibilities will be the development of novel immunoassays for infectious diseases and will include purification techniques, enzyme conjugation, electrophoretic techniques, and solid phase technology. The successful candidate will have an MS in Immunochimistry, or Biochemistry with at least 3 years of experience in the diagnostic industry. Experience in immunoassay development is desirable. This individual must possess superior oral and written communication skills, and the ability to effectively interface with all levels of management is essential.

Marion offers an excellent total compensation and benefits program including bonus, stock options, profit sharing, comprehensive group health, dental and life insurance benefits. Please send a complete resume including salary history in confidence to: **Marion Laboratories, Inc., Recruiting and Placement, Dept. CSM, P.O. Box 9627, Kansas City, MO 64134.** Equal Opportunity Employer.

 **Marion
Laboratories, Inc.**

The *Uncommon* Company

Postdoctoral Fellow Project Management

Smith Kline & French Laboratories, a world leader in pharmaceutical research, has a unique postdoctoral opportunity at our new worldwide Research and Development campus located near Valley Forge, PA.

As a Postdoctoral Fellow in Project Management, you will play a key role in drug development, providing scientific and administrative support to the Director, Project Management while learning and participating in the drug development process at SK&F R&D and developing skills in project planning and management.

Other responsibilities include assisting the Director in design and implementation of strategies for enhanced compound development; problem solving in a broad range of scientific disciplines; serving as deputy Project Manager on a selected development project; and assisting in the introduction and updating of new development projects on the project planning system.

We require a PhD, PharmD or MBA with experience in biomedical science or equivalent training as well as proven analytical skills, demonstrated communication and organization skills, and ability to act independently. Previous computer experience is desirable.

We offer a stimulating work atmosphere in a technologically advanced environment. Interested and qualified candidates should send C.V. to T. Welford, Manager Personnel Relations, Smith Kline & French Laboratories, 1574 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer M/F/H/V.

**SmithKline
Beckman**
CORPORATION

Experimental Toxicology Postdoctoral Fellowship

The Bristol-Myers Pharmaceutical Research and Development Division has an opening for a postdoctoral candidate in its Department of Experimental Toxicology in Syracuse, New York.

This position will require an individual with a Ph.D. in Biochemistry, Pharmacology or Molecular Biology with a strong interest in applying his/her skills to the field of cellular toxicology. Demonstrated ability to perform creatively and to publish research of high quality is required. We are seeking an individual with experience and interest in one or more of the following areas: intracellular calcium and cytoskeletal function, cellular metabolism and the regulation of eukaryotic genes.

The successful candidate will be responsible for performing and publishing basic research aimed at elucidating mechanisms of drug-induced toxicity as part of a multi-disciplinary research team.

This one-year appointment (with the potential for renewal for an additional year) offers an excellent salary, comprehensive benefits and exceptional opportunity for professional achievement. For prompt, confidential consideration, forward your resume to: **BRISTOL-MYERS, Pharmaceutical Research and Development Division, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.** Attention: Employee Selection and Placement. An Equal Opportunity Employer.

Bristol-Myers

Associate Director of Nutrition

Help advance nutritional science across a broad product line.

This is an excellent opportunity to use your broad-based experience and knowledge in a vital role with a leading East Coast nutrition company.

You'll be joining a top-caliber R&D team involved in conducting biochemical nutritional research. Your investigations into this important area will impact directly on development of new products for infants and adults. A minimum of 5 years related experience and a PhD in Nutrition or Biochemistry are required. Familiarity with food analysis and food technology is essential, as well as demonstrated skills interfacing with governmental, academic or other professional organizations.

We offer the advantages of a distinctive R&D environment along with a highly competitive salary and comprehensive company benefits. If interested and qualified, please forward your resume including salary history in confidence to:

BOX 191, SCIENCE

An Equal Opportunity Employer. M/F/H/V responses encouraged.

POSITIONS OPEN

BIOCHEMISTRY OF PROTEINS UNIVERSITY OF MAINE

A tenurable assistant professorship is available in the Biochemistry Department, University of Maine, for a person who will develop a research program focusing on some aspect of proteins, for example, peptide hormones, membrane receptors, cytoskeleton, enzymes, or others. The appointee will share newly constructed facilities with biochemists, molecular and cellular biologists, immunologists, and geneticists working with plant, animal, and microbial systems. Interest in developing collaborations within that group and in developing contacts with the biotechnology and natural products based industries of Maine will be an advantage. The appointee will also participate in the graduate and undergraduate teaching programs of the Biochemistry Department and of the Molecular and Cellular Biology Program. Apply with curriculum vitae, a detailed description of proposed research, and minimum of three reference letters to: **Dr. Robert Roxby, Biochemistry Department, University of Maine, Orono, ME 04469.**

CARDIOVASCULAR PHYSIOLOGIST Department of Physiology University of Kansas Medical Center

Applications and nominations are invited for this tenured position to begin 1 July 1987 or sooner. We are seeking candidates with first-class records in research as judged by quality, productivity, and sustained and current research funds from extramural sources. Commitment to the teaching and training programs of the department is essential. Candidates should possess the Ph.D. or M.D. degree and be several years beyond the postdoctoral level. Rank and salary will be commensurate with previous experience. The closing date for applications is 15 December 1986, or until a suitable candidate is found. Applicants should send a copy of their curriculum vitae, a statement of research accomplishments and future goals, and the names of three references to:

Dr. Gilbert S. Greenwald
Department of Physiology
University of Kansas Medical Center
Kansas City, KS 66103

An Equal Opportunity/Affirmative Action Employer

CELLULAR/MOLECULAR IMMUNOLOGIST EASTERN VIRGINIA MEDICAL SCHOOL

The Department of Microbiology and Immunology of the Eastern Virginia Medical School invites applications for a tenure-track faculty position at the assistant professor level. A Ph.D. or M.D. with at least 2 years of postdoctoral experience in cellular or molecular immunology with outstanding research achievement and research funding or potential for funding is required to complement ongoing research in tumor biology and immunology. We are particularly interested in individuals applying cellular and molecular approaches in the areas of biological response modifiers, cell-mediated immunity, anti-idiotype antibodies, tumor metastasis, growth factors, immunoregulation, and membrane biochemistry. Experience in monoclonal antibody technology and flow cytometry also desirable. Excellent opportunities exist for collaborative interactions among basic science and clinical departments. Primary emphasis is on research, with limited but active participation in teaching immunology to medical students and teaching and training graduate students in cell and molecular biology. The basic science departments are in a major growth phase with emphasis on cell and molecular biology that includes excellent incentives. A well-equipped laboratory with attractive start-up funds is available to the successful candidate. Eastern Virginia Medical School is located within the lovely harbor district of Norfolk, Virginia, and is only minutes away from the Chesapeake Bay and Atlantic Ocean. Interested individuals should send curriculum vitae, three letters of recommendation, and a brief description of their current and future research activities to:

George L. Wright, Jr., Ph.D.
Professor and Chairman
Department of Microbiology and Immunology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

BIOMEDICAL ENGINEER

The Veterans Administration Medical Center, Long Beach, is recruiting for a full-time biomedical engineer. Applicants must possess either a bachelor's degree in biomedical engineering from an accredited college, plus 3 years of professional experience in biomedical engineering, or a master's degree, plus 1 year of experience, or a doctoral degree. This individual should possess the following knowledges, skills, and abilities:

- Ability to develop and maintain calibration of sophisticated instruments, diagnostic, and therapeutic devices.
- Knowledge and skill in engineering disciplines and a strong background in human anatomy and physiology.

Women and minorities are encouraged to apply. The Veterans Administration is an Equal Opportunity Employer. Please send current résumé to: Personnel Service (05D), Veterans Administration Medical Center, 5901 East Seventh Street, Long Beach, CA 90822.

CANCER PHARMACOLOGIST

The University of Southern California (USC) Comprehensive Cancer Center is seeking to recruit a pharmacologist with expertise in molecular aspects of antineoplastic drug therapy and clinical applications. Applicants should have training as pharmacologists and be interested in molecular analysis of drug action. The appointment will be at the level of associate professor. Applicants should also be interested in liaising with the clinical programs ongoing at the USC Cancer Center and be involved in the design and development of new treatment protocols, and so forth. Interested individuals should submit their curriculum vitae together with three references to: **Dr. Peter A. Jones, Director for Basic Science, USC Comprehensive Cancer Center, 2025 Zonal Avenue, Los Angeles, CA 90033. Affirmative Action/Equal Opportunity Employer.**

CELL BIOLOGIST UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Developmental and Cell Biology is recruiting for a tenure-track position at the assistant professor level. Research areas of interest include post-translational modification, sorting, and compartmentation or secretion of proteins; organellar function-communication, movement, and interactions. We particularly seek those individuals using biochemical approaches at the protein and/or DNA levels. The area of research interest is not as important as the overall quality and approach. The selected candidate is expected to develop a strong independent research program and interact with an ongoing program in cell biology at the graduate and undergraduate levels. Applicants should submit curriculum vitae and copies of up to five representative publications and should request that three letters of recommendation be sent to: **Chair, Cell Biology Search Committee, Department of Developmental and Cell Biology, University of California, Irvine, CA 92717.** Applications should be complete by 15 December 1986. *The University of California, Irvine, is an Equal Opportunity/Affirmative Action Employer.*

EXPERIMENTAL PATHOLOGIST

The University of Southern California (USC) Comprehensive Cancer Center is seeking a Board-certified surgical pathologist to develop the program in the biology of human gynecological cancers. Applicants should have experience in tissue culture techniques and also in molecular biology and will be expected to develop an independent program of research in the study of the biology of human gynecological cancers. We are particularly interested in attracting individuals with interests in growth factors and the role of oncogenes in neoplastic progression of gynecological cancers. The Cancer Center contains considerable core resources such as a microchemical core laboratory, computer support, dishwashing and media preparation facilities, and so forth. The individual will also spend approximately 20 percent of his/her time doing pathology service work in the Norris Hospital. Interested applicants should submit their curriculum vitae and names of three references to: **Dr. Peter A. Jones, Director for Basic Science, USC Comprehensive Cancer Center, 2025 Zonal Avenue, Los Angeles, CA 90033. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

DEPARTMENT CHAIR. The University of Southern Mississippi invites applications for chair, Department of Chemistry, to provide vigorous leadership for a growing, Ph.D.-granting department having 20 faculty members with expertise in traditional areas of chemistry, as well as biochemistry and polymer chemistry. Applicants must have a strong commitment to research, external funding, and quality education. The department has 40 graduate and 70 undergraduate majors, modern facilities and equipment, and is guided by an active, 30-member External Advisory Board. Attractions include competitive salaries, mild winters, a progressive community, and proximity to the Gulf Coast and New Orleans. Send résumé, research plans, and names and telephone numbers of three references to: **Dr. Grayson Rayborn, Southern Station, Box 5165, University of Southern Mississippi, Hattiesburg, MS 39406-5165.** Applications received after 15 December 1986 cannot be assured of consideration. *Equal Opportunity/Affirmative Action Employer.*

CHAIR, DEPARTMENT OF CHEMISTRY, UNIVERSITY OF WASHINGTON. Applications and nominations are invited for the position of professor and chairperson of the Department of Chemistry. We seek a vigorous individual with outstanding research accomplishments, a distinguished teaching record, and a special talent and commitment to executive leadership. This department is undergoing a period of rapid growth in the vitality and quality of its research and teaching activities. The faculty is being expanded and renewed by the appointment of numerous outstanding scientists with research interests in new and diverse directions. Guiding the department through a period of continued improvement and change is both the challenge and the opportunity. As with any faculty position, normal activities may include research and graduate teaching. Interested candidates holding a doctoral degree should submit applications by 15 December 1986 to: **Professor E. J. Heller, Search Committee, Department of Chemistry, BG-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

CHAIRMAN AND PROFESSOR Department of Crop Science Ontario Agricultural College University of Guelph

Nominations and applications are invited for the position of chairman, Department of Crop Science, University of Guelph. The position is available 1 July 1987. The Department of Crop Science is one of ten administrative units in the Ontario Agricultural College (OAC). It has a close working relationship with units within the college, as well as with departments within the Colleges of Biological Science, and Physical Science. The department includes 20 faculty, 12 other professionals, and 75 staff. The undergraduate major in crop science averages 45 students each year and there are currently 65 graduate students enrolled. The department administers major research programs in crop breeding, biotechnology, crop physiology and production, and weed science. The major crops are cereals, maize, forages, and oilseeds.

The department chairman will have administrative responsibilities for the departmental programs, provide leadership to the faculty, and assist them in professional development. The chairman will maintain liaison with other administrators within the university, with government agencies, and allied industry groups to coordinate research, teaching, and extension programs and strengthen interdisciplinary activities. The chairman will actively seek and develop new sources of funding for the departmental programs and take an active part in professional organizations. The position provides the opportunity to continue personal involvement in teaching, research, and/or extension. Candidates must have background and experience in crop science or related areas and have an excellent scholarly record. Candidates must have demonstrated leadership and administrative ability.

Applications will be accepted until 31 December 1986. Applicants should submit curriculum vitae and the names and addresses of three people who may be contacted for letters of reference to: **Dr. F. L. McEwen, Dean, OAC, University of Guelph, Guelph, Ontario, Canada N1G 2W1.** *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.* Position subject to final budgetary approval.

Medicinal Chemist

The Medicinal Chemistry Department of Smith Kline & French Laboratories has an excellent career opportunity for an outstanding chemist. The selected individual will work in a state-of-the-art research facility in the Philadelphia suburbs near Valley Forge and will assist in the synthesis and design of molecules destined to interrupt enzymatic processes; interpret analytical data to confirm structures; suggest and examine alternate synthetic routes; and effectively communicate results.

The successful candidate will possess the following:

- M.S. in Chemistry or B.S. with 3-4 years experience; or equivalent.
- Minimum of 2 years experience in synthetic chemistry with excellent working knowledge of reaction mechanisms.
- Skilled in modern methods of isolation of reaction products.
- Skilled in the use of modern physical methods to assign structure of reaction products.

We offer an excellent compensation, benefits and relocation package as well as the opportunity for personal and professional growth. Please reply in confidence to: George P. Kissell, Jr., Manager, Personnel Relations, Smith Kline & French Laboratories, 1586 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer M/F/H/V.

SK&F

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Carcinogen Metabolism and Toxicology

Postdoctoral Research Appointment

The Lawrence Livermore National Laboratory is currently seeking a Postdoctoral Research Staff Member for a two year term appointment to work in research dealing with carcinogen metabolism and toxicology. The candidate will study the metabolism and DNA binding of a series of mutagens derived from cooked foods. The goal of this project is to understand the metabolic intermediates responsible for the genetic changes seen in bacterial and mammalian cells and to identify the specific DNA adducts formed. The successful candidate will become part of a multidisciplinary research group examining the risk to man of consuming cooked-food mutagens/carcinogens. A strong background in carcinogen or drug metabolism is desired.

To apply for this position, interested applicants are invited to submit their curriculum vitae to: Earl G. Morrell, Professional Employment Division, Lawrence Livermore National Laboratory, Dept. L-725, P.O. Box 5510, KSCA602B, Livermore, CA 94550. U.S. Citizenship is required. An Equal Opportunity Employer M/F/H/V.

**Lawrence Livermore
National Laboratory**

Biochemical Toxicologist

The Tradition Continues.
Working to Broaden the Base
of Scientific Knowledge.

At Upjohn, one of the world's premier pharmaceutical companies, we work to foster an open environment where scientists can flourish, addressing some of the most critical healthcare problems of our time.

Our Pathology and Toxicology Research Unit seeks a Biochemical Toxicologist to be responsible for a laboratory research program to evaluate the relevance of animal or other toxicity test system data to potential human health effects. You'll also develop methodologies useful for improved assessment of toxicity. A Ph.D. in Toxicology or a related discipline, and a minimum of two years' post doctoral experience in an area relating to exploration of mechanism of chemical toxicity is required. In addition to an outstanding academic record, excellent interpersonal skills will allow you to collaborate effectively with other scientists in our research community.

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

For confidential consideration, please call from outside Michigan toll free 1-800-253-8600, ext. 3-6767, (inside Michigan call collect 616-323-6767) to request an employment application to be sent to you immediately. Please refer to ad number 20100-F when calling.



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SENIOR SCIENTIST DRUG METABOLISM

The Squibb Institute for Medical Research is recognized as an international leader in the research and development of pharmaceuticals and related health care products. We currently have an exceptional opportunity available for an outstanding scientist to lead and direct a laboratory in the Department of Drug Metabolism. The laboratory will support early stages of drug discovery by studying the disposition of investigational compounds in animals.

The individual selected will work closely with pharmacologists and medicinal chemists, and will have excellent supervisory skills and a facility and enthusiasm for hands-on laboratory work.

Qualified candidates should have a Ph.D. in Pharmacology or related field and 4 to 8 years of post-doctoral experience in Drug Metabolism. Familiarity with modern analytical instruments including GLC, HPLC, GC/MS and LSC is required, as well as expertise in developing and running assays for isotopically labeled and unlabeled drugs and metabolites in biological fluids. He/she should also possess good oral and written communication skills and should have the ability to work as part of a multidisciplinary team of scientists.

The Squibb Institute is located in Princeton, NJ, a pleasant semi-rural setting convenient to both New York City and Philadelphia. In addition to our excellent salary and benefits package, we offer the opportunity for exceptional scientists to pursue stimulating careers.

For confidential consideration, please send your curriculum vitae to the Squibb Institute for Medical Research, Human Resources Department RW415, P.O. Box 4000, Princeton, NJ 08543-4000. An Equal Opportunity Employer.



SQUIBB

Where science comes to life.

POSITIONS OPEN

CHAIRMAN, DEPARTMENT OF NEUROLOGY—STATE UNIVERSITY OF NEW YORK (SUNY) HEALTH SCIENCE CENTER AT SYRACUSE is receiving applications for chairman of the Department of Neurology. The position includes responsibility for conducting strong educational programs in undergraduate, graduate, and continuing medical education. Candidate should have a demonstrated capacity for establishing independent research programs with strong external grant support and a vigorous broad-based program in clinical neurology. Send curriculum vitae, names of three references, a description of current research interests and grant support, and an outline of special clinical and educational interests to: **Dr. Robert B. King, Chairman, Neurology Search Committee, SUNY Health Science Center, 750 East Adams Street, Syracuse, NY 13210.** Deadline for applications 30 November 1986.

An Affirmative Action/Equal Opportunity Employer.

CHAIRPERSON, DEPARTMENT OF BIOLOGICAL SCIENCES (PLANT PHYSIOLOGY/MOLECULAR BIOLOGY). The Department of Biological Sciences, Louisiana State University (LSU) in Shreveport invites applications for the position of professor and chairperson. The department is composed of ten faculty members and grants the B.S. degree in biological sciences and combined degrees with LSU Medical Center—Shreveport. Qualifications include a Ph.D. in plant physiology/ molecular biology, a commitment to quality undergraduate instruction and research, interest in developing a graduate program, and a history of securing extramural funding for instruction and research. The new chairperson will be expected to promote cooperation with LSU Medical Center—Shreveport, promote and expand the Museum of Life Sciences, contribute to faculty development, improve existing programs, and develop new programs. LSU in Shreveport is a branch of the LSU System and is committed to excellence. Applications should include curriculum vitae, names of at least three references, and a letter stating teaching and research interests. Send correspondence to: **Chairman, Search Committee, Department of Biological Sciences, Louisiana State University in Shreveport, 8515 Youree Drive, Shreveport, LA 71115.** *An Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF GUELPH COLLEGE OF BIOLOGICAL SCIENCE DEPARTMENT OF MICROBIOLOGY CHAIRPERSON

The University of Guelph is seeking a chairperson for the Department of Microbiology. Candidates should have an outstanding record of research achievement and interest in promoting high standards in teaching at the undergraduate and graduate levels. The department has 15 full-time faculty members whose research areas include: (i) investigations of cell surfaces using immunological, recombinant DNA and EM techniques, (ii) studies of viral and bacterial fish pathogens and response of fish to vaccines, and (iii) investigations relating basic aspects of biotechnology to applied problems. Faculty members also participate in the activities of Guelph-Waterloo Biotechnology, a joint venture of the University of Guelph and the University of Waterloo. The department offers an undergraduate program in microbiology and a graduate program leading to M.Sc. and Ph.D. degrees. Currently, 40 undergraduate students majoring in honors microbiology graduate each year, while 26 students are enrolled in department graduate programs.

The university, with a student population of 11,000 undergraduate and 1,168 graduate students, is located in the city of Guelph approximately 80 kilometers west of Toronto. The College of Biological Science, with 2,000 undergraduate majors and 177 graduate students, is one of seven colleges in the university.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. This position is subject to final budgetary approval.

Interested candidates should submit curriculum vitae, list of publications, and the names of three referees before 30 December 1986 to: **Bruce H. Sells, Dean, College of Biological Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

POSITIONS OPEN

NASA/Goddard Space Flight Center is seeking candidates for the position of **CHIEF, LABORATORY FOR EXTRATERRESTRIAL PHYSICS.** Incumbent will develop, manage, and participate in the laboratory's broad program of experimental and theoretical research in space science. Ph.D. or equivalent experience required. Candidates should contact: **Laura Waple, NASA/Goddard Space Flight Center, Personnel Division, Code 221, Greenbelt, MD 20771.** Telephone: 301-286-9220. Applications received by 31 December 1986 will be given consideration. The position is in the Senior Executive Service (\$61,296 to \$72,300). *Equal Opportunity Employer.*

CHIEF OF ENVIRONMENTAL EPIDEMIOLOGY AND TOXIC HAZARDS

In the Connecticut Department of Health Services, this position will function as the program manager of risk assessment for toxic substances. Supervisory administrative, or consultative background in epidemiology, toxicology, environmental engineering, or medicine is required. An M.D. or Ph.D. is preferred. Affiliations with major universities and medical centers can be arranged. Salary is competitive and negotiable. This is a competitive civil service position. Send résumé to:

**Personnel Administrator
Connecticut Department of Health Services
150 Washington Street
Hartford, CT 06106**

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POSITION IN COMPUTATIONAL VISION

The newly formed **Department of Cognitive and Linguistic Sciences at Brown University** seeks to fill a tenure-track assistant professor faculty position in the area of computational vision starting 1 July 1987. Applicants with a background in computational approaches to biological vision will be given preference. Experience in the behavioral study of perception is also desirable. Ph.D. is required. Applicants should send curriculum vitae, recent reprints, statement of research interests, and three letters of reference to: **James Anderson, Chair, Search Committee, Department of Cognitive and Linguistic Sciences, Box 1978, Brown University, Providence, RI 02912,** before 15 December 1986.

Brown University is an Equal Opportunity/Affirmative Action Employer.

DEVELOPMENTAL BIOLOGIST

The Department of Biology of Emory University invites applications for a tenure-track position at the assistant professor level to begin 1 September 1987. The department is currently expanding in the area of developmental biology. Our present search is for a developmental biologist who will interact with established groups in molecular biology, genetics, or neurobiology. The successful candidate will be expected to establish an independent research program and participate actively in the teaching program. Curriculum vitae, a statement of research interests, and the names and addresses of three references should be submitted by 30 December 1986 to: **Dr. William A. Elmer, Developmental Biology Search Committee, Department of Biology, Emory University, Atlanta, GA 30322.** *Emory University is an Affirmative Action and Equal Opportunity Employer.*

DIRECTOR OF PREVENTION CENTER OF ALCOHOL STUDIES RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

Responsibilities: to develop and administer the new Division of Prevention, conduct research, develop and implement the joint Cornell-Rutgers R. Brinkley Smithers Institute for Alcoholism Prevention and Workplace Problems, and to attract grant funding. Candidate should be an active researcher; a Ph.D. or M.D. is required for this associate professor level (tenure-track) position. Deadline for application is 5 January 1987. Interested candidates should send their curriculum vitae and three letters of reference to:

**Barbara S. McCrady, Ph.D.
Chair, Search Committee
Center of Alcohol Studies
Rutgers University
Piscataway, NJ 08854**

An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DEVELOPMENTAL GENETICS. The Department of Developmental Genetics and Anatomy and the Developmental Biology Center invite applications for a faculty position in the area of molecular genetics of mammalian development. We seek to recruit an outstanding individual who will maintain a research program using genetic, recombinant DNA, biochemical, immunological, and/or cell biological tools. *Women and members of minority races are especially urged to apply.* Send curriculum vitae, summary of previous and proposed research, and names of three references to: **Dr. Anthony P. Mahowald, The Department of Developmental Genetics and Anatomy, Case Western Reserve University, 2119 Abington Road, Cleveland, OH 44106.**

DIAGNOSTIC RADIOLOGIC PHYSICIST

The Department of Radiology of the Hospital of the University of Pennsylvania is seeking a diagnostic radiologic physicist. The position includes the responsibility for supervising the image quality control program, consulting on clinical dosimetry, and teaching radiologic physics at a graduate and undergraduate level. Research work is encouraged and extensive laboratory facilities are available.

Interested applicants should send their résumé to: **Harold L. Kundel, M.D., Department of Radiology Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.**

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

DIRECTOR CALIFORNIA PRIMATE RESEARCH CENTER University of California, Davis Davis, CA

Applications and nominations are invited for **Directorship of California Primate Research Center (CPRC)** available 1 July 1987. The director is responsible for management of the laboratory with 24 core and 64 affiliate scientists, 19 collaborating scientists, and 100 graduate students; overall management of research programs; administration through contracts between the University of California and the Division of Research Resources, National Institutes of Health, and 35 extramural grants and contracts. CPRC research programs relate to selected human health problems for which the nonhuman primate is the animal model of choice, and have a theme of effects of environmental influences. Major programs in developmental and reproductive biology, fetal and neonatal medicine, respiratory diseases, behavioral biology/pathobiology and primate medicine. The colony consists of approximately 2700 nonhuman primates.

An applicant should have demonstrated success in administration; be a scientist of stature who has made significant contributions in a biomedical field, and have an intent to remain active as an investigator. A background in some aspects of primatology is beneficial, but not essential. The director is expected to qualify for, and will be appointed to, a professional title in an appropriate department on the Davis campus.

Applicants should submit curriculum vitae with the names of three references to: **Dean E. A. Rhode, School of Veterinary Medicine, University of California, Davis, CA 95616,** by 31 December 1986.

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

FACULTY POSITION

The Microbiology Department at the University of Texas at Austin has an opening for an assistant professor. Appointment at a higher rank is possible for a highly qualified individual. Of most interest are individuals studying **prokaryotic genetics or developmental processes in yeasts or other eukaryotes.** However, exceptional applicants interested in other areas of microbiology and molecular biology are encouraged to apply.

Please submit curriculum vitae, including names and addresses of three references, and a summary of research interests to: **Dr. William R. Folk, Search Committee Chairman, Microbiology Department, The University of Texas at Austin, Austin, TX 78712-1095.** *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

**Chair
Department of Physiology
College of Medicine
THE PENNSYLVANIA STATE UNIVERSITY**



The Pennsylvania State University College of Medicine is seeking a new chairperson in Physiology to succeed Dr. Howard E. Morgan, past President of the American Physiological Society and present President of the American Heart Association. The Department has a tradition of excellence in research and teaching. The senior faculty are leaders in their individual fields of research, and their endeavors are currently supported by over \$3 million in grants and contracts. The new chairperson will be expected to continue and expand the research achievements of a faculty which uses the tools of modern cell physiology and molecular biology to answer questions of physiological interest. The chair carries with it the Lloyd Huck Professorship of Physiology. The well-equipped research facilities include approximately 20,000 square feet of space occupied by individual research laboratories. The department trains graduate students who seek Ph.D. degrees in Physiology, Cellular and Molecular Biology, and Neuroscience; and it is responsible for the teaching of physiology and neurobiology in the medical curriculum. Candidates should have a distinguished record of scholarship and professional achievement, a strong commitment to medical and graduate education, and demonstrated leadership and administrative abilities.

Submit applications or nominations by November 30, 1986

to: Julien F. Biebuyck, M.B., D.Phil.,
Chairman, Search Committee for Chair of Physiology
The Pennsylvania State University College of Medicine
The Milton S. Hershey Medical Center
P. O. Box 850, Drawer A-1
Hershey, PA 17033
Equal Opportunity Affirmative Action Employer

POSTDOCTORAL POSITIONS

The **MIT Spectroscopy Laboratory** has openings for three postdoctoral researchers to pursue selected applications of lasers and laser spectroscopic techniques. The Spectroscopy Laboratory houses two laser instrumentation facilities supported by NIH and NSF. Research opportunities exist in applications of lasers to chemistry, nuclear physics, collision physics, picosecond spectroscopy and medicine and surgery. Candidates should have a Ph.D. in either physics or chemistry or a related engineering field, extensive hands-on experience in designing and building laser-optical systems.

Candidates must be capable of leadership and providing guidance to graduate and undergraduate students, and will be expected to spend some fraction of time in service to the Laser Research Center. Curriculum vitae and names of three references should be sent to:

Professor Michael S. Feld, Director, Spectroscopy Laboratory, Room 6-014, MIT, 77 Massachusetts Avenue, Cambridge, MA 02139.

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MIT

RESEARCH SCIENTIST CARDIOVASCULAR PHARMACOLOGY

We've Made An Exceptional Commitment To Drug Discovery.

Here at Ortho Pharmaceutical Corporation, scientists are working in close knit teams to modify structures and improve the potency and activity of drugs in several therapeutic areas. For example, we are looking for improved, novel cardiovascular agents that can be used for treating clinical heart failure and various cardiomyopathies.

We've recently created an opportunity in our Cardiovascular Pharmacology Department for a PhD Pharmacologist to work with our Drug Discovery Research Program to conceptualize and develop research approaches and methodologies for discovering new cardiovascular drugs.

To qualify you'll need a PhD in Pharmacology and 0-5 years' Post Doctoral Research in Cardiovascular Pharmacology. Specific training

in cardioprotection/antidysrhythmic research is desirable. Sound oral and written communications capabilities are also required as well as excellent personal interaction skills.

This highly visible position provides a competitive salary, and the full complement of benefits that you would expect from a Johnson & Johnson company. For consideration please forward your resume to: Craig Mangan, Ortho Pharmaceutical Corporation, Dept. 33, P.O. Box 300-S1086, Route 202, Raritan, NJ 08869-0602. An equal opportunity employer.

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POSITIONS OPEN

BROWN UNIVERSITY DIRECTOR, HEALTH CARE EVALUATION ASSOCIATE PROFESSOR OF MEDICAL SCIENCE

Brown University has made a significant commitment to the further development of the Health Care Evaluation Unit. The unit initially implemented major research projects in selected areas. As a result of the broad academic development of the unit and its potential contribution to Brown University, the faculty leadership position has been determined to warrant a tenured faculty appointment at this time at the level of associate professor. Individuals at Brown University who could appropriately be candidates for the position have been identified.

The minimum requirements are: doctoral degree in social policy, social welfare, or a related field; 5 years of administrative experience; experience and proven effectiveness teaching research methodology and social policy courses; independent and externally supported research programs relating to long-term care, cancer care, hospice, functional assessment, and social policy; proven ability to organize and successfully compete for external research grant support; experience and proven effectiveness in relating to external agencies.

Qualified individuals should send a letter of interest, curriculum vitae, and the names of five possible referees no later than 15 November 1986 to: **Lois Monteiro, Ph.D., Professor and Chair, Department of Community Health, Box G, Brown University, Providence, RI 02912.** *Brown University is an Equal Opportunity/Affirmative Action Employer and actively solicits applications from qualified minority and protected group members.*

DOCTORAL TRAINING AVAILABLE IN CELLULAR NEUROPHYSIOLOGY

Ph.D. project will utilize patch clamp technique to study physiology and pharmacology of GABA receptors in cultured spinal neurons and arterial smooth muscle cells. Student will acquire strong background in patch clamp, together with a familiarity with BASIC software and data processing. Send résumé with three references to: **Dr. D. A. Mathers, Department of Physiology, University of British Columbia, 2146 Health Sciences Mall, Vancouver, B.C., Canada, V6T 1W5.** Telephone: 604-228-5684.

UNIVERSITY OF IOWA ENDOWED PROFESSORSHIP IN BIOCATALYSIS

The Biocatalysis Research Group which is comprised of faculty members from the Departments of Biochemistry, Botany, Chemical and Materials Engineering, Chemistry, Microbiology, and Medicinal and Natural Products Chemistry, has received \$500,000 from the state of Iowa and matching funds from the university to endow a professorship in biocatalysis. We are seeking an eminent scholar who will bring an established program of research and teaching to the University of Iowa. It is anticipated that the professor will assume a leadership role in the activities of the Biocatalysis Research Group. These will include organizing interdisciplinary research teams, and seeking cooperation amongst members of the Biocatalysis Research Group and private industry. The multidisciplinary Biocatalysis Research Group has been active for the past 4 years and has initiated a successful seminar series, interdisciplinary research projects, an informal course program in biotechnology, and secured a state-of-the-art fermentation facility.

The person appointed to the position must have a Ph.D. degree and qualify for a tenured faculty appointment. Salary is expected to range between \$70,000 to \$100,000 per annum commensurate with qualifications and experience. The choice of departmental affiliation is open. Applications including curriculum vitae, a current list of publications and grant support, and the names of three referees should be sent to:

Dr. John P. N. Rosazza
Coordinator of the Biocatalysis Research Group
College of Pharmacy
The University of Iowa
Iowa City, IA 52242
Telephone: 319-353-6578

The position will be filled by 1 July 1987. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ENVIRONMENTAL HEALTH SCIENTIST needed for Toxic Substances Clearinghouse to conduct research and provide information on chemical health/environmental effects and to assist community environmental health investigations. Project of Texas Center for Rural Studies and University of Texas Medical Branch Galveston. Ph.D. or M.S. in toxicology or associated fields, or equivalent experience. Salary: \$23,000 to \$26,000 plus benefits. Job starts January 1987. Send curriculum vitae, writing sample, and references to: **Clearinghouse, Box 2618, Austin, TX 78768.** *Equal Opportunity Employer/Affirmative Action.*

EVOLUTIONARY BIOLOGIST

The Zoology Department, University of California, Davis invites applications for a tenure-track position at the assistant professor level for September 1987. A strong, independent research program is expected. We are interested in a person who applies some combination of molecular, morphological, physiological, or quantitative genetic approaches to the study of animal evolution. Preference will be given to candidates able to teach evolution at the upper-division level. Persons wishing to apply should send curriculum vitae, reprints of published work, a description of research program and future plans, a summary of teaching capabilities, including evaluations if available, and have three letters of recommendation sent to: **Dr. Arthur M. Shapiro, Chairman, Search Committee, Department of Zoology, University of California, Davis, CA 95616.** Final date for receipt of applications is 31 December 1986. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

EVOLUTIONARY GENETICS AT STATE UNIVERSITY OF NEW YORK AT STONY BROOK (SUNY). We seek applicants for a tenure-track faculty position, starting September 1987 in evolutionary genetics. Rank is open. We are particularly, though not exclusively, interested in individuals who address evolutionary problems via molecular or developmental aspects of genetics. Please send curriculum vitae, reprints, and have three letters of reference sent to: **Dr. Walter Eanos, Evolutionary Genetics Search, Ecology and Evolution Department, SUNY Stony Brook, Stony Brook, NY 11794-5245.** Application deadline is 15 December. *SUNY-Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK number 251.

The Department of Geology is soliciting applications for an anticipated **TENURE-TRACK FACULTY POSITION IN GROUND WATER HYDROLOGY** to begin August 1987. Areas of related interest within the 23-member department include hydrogeology, low temperature geochemistry, isotope geochronology, and environmental chemistry. The successful candidate is expected to develop a strong research program, and teach graduate and undergraduate courses that complement the existing hydrogeology—low temperature geochemistry areas of specialty.

Send letters of application accompanied by curriculum vitae, description of research interests in ground water modeling, and names of three referees to: **Professor Frank T. Caruccio, Ground Water Search Committee, Department of Geology, University of South Carolina, Columbia, SC 29208.** Closing date for applications is 31 December 1986.

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

PRINCETON UNIVERSITY PLASMA PHYSICS LABORATORY

Princeton University and the Plasma Physics Laboratory (PPL) are seeking candidates for **Senior Tenured Appointments** to be made in appropriate academic departments of the university. Preference will be given to candidates with distinguished records of research in plasma physics, in closely related subfields of physics, or in allied disciplines in the physical sciences, mathematics, or engineering. Please send a letter of application and curriculum vitae to: **Professor Thomas H. Stix, Associate Director for Academic Affairs, Princeton Plasma Physics Laboratory, Post Office Box 451, Princeton, NJ 08544.** Closing date, 15 December 1986.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

COLUMBIA UNIVERSITY NEUROBIOLOGY

The Department of Biological Sciences, Columbia University, in the city of New York, invites applications for a tenure-track faculty position in the area of neurobiology. The level of appointment—senior or junior—will depend upon qualifications of the successful applicant. The candidate is expected to demonstrate a high level of scientific excellence and productivity, and to have a strong commitment to undergraduate and graduate teaching. The three major programs within the Department of Biological Sciences are: molecular biology and biochemistry, eukaryotic cell biology and virology, and neurobiology. Neurobiology faculty share a strong interest in problems of developmental, cellular, and molecular biology of the nervous system: the successful applicant is expected to share these interests.

Applications should include curriculum vitae, copies of most significant publications, and a summary of research goals. Junior applicants should also request that letters from three references be sent in support of their application.

Send inquiries by 1 January to: **Chairperson, Neurobiology Search Committee, Department of Biological Sciences, 1018B Sherman Fairchild Center, Columbia University, New York, NY 10027.**

Columbia University is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are especially encouraged to apply.

FACULTY POSITIONS ANATOMY AND PHARMACOLOGY/PHYSIOLOGY

Applications are invited for two faculty positions available January 1987. Candidates must have an earned doctorate appropriate to the discipline. Position descriptions are as follows: one position in anatomy at junior rank requiring broad-based training in anatomical sciences with emphases in histology and gross anatomy. One position in pharmacology/physiology at senior rank requiring ability to teach a variety of topics in medical physiology and pharmacology. A Pharm. D. degree and previous administrative experience is preferred. Teaching responsibilities in both positions involve medical, podiatric, and allied health students at a rapidly expanding academic medical campus. Previous productive research experience essential to both positions. Rank and salary commensurate with qualifications. Send curriculum vitae and references to: **William J. Dyche, Ph.D., Associate Dean for Preclinical Affairs, University of Osteopathic Medicine and Health Sciences, 3200 Grand Avenue, Des Moines, IA 50312.**

The University is an Equal Opportunity Employer.

FACULTY POSITION CHEMISTRY: Applications are solicited for the position professor or associate professor of chemistry and coordinator of the Clinical Chemistry Program at Cleveland State University. Since the clinical chemistry program is centered on doctoral-level research, the person appointed must have a strong record of research publication, as well as a commitment to continue his or her own research program. The department is particularly interested in candidates with major-agency funding and previous academic experience in a chemistry department. Certification by the American Board of Clinical Chemistry is desired, but not essential. A complete application should include curriculum vitae and at least three letters of recommendation. Direct applications by 30 December 1986 to: **Professor A. H. Andrist, Chairman, Department of Chemistry, Cleveland State University, 1983 East 24 Street, Cleveland, OH 44115.** *Equal Opportunity Employer, M/F/H.*

The Department of Biological Sciences at the University of Maryland Baltimore County (UMBC) has a **Tenure-Track Position** for an outstanding **PLANT MOLECULAR BIOLOGIST** at a rank commensurate with experience. The department has 25 faculty members and 75 graduate students whose research interests range from molecular to population biology with a strong emphasis in molecular and cellular biology. Applicants should submit curriculum vitae and a statement of research interests by 1 January 1987 to: **Dr. Keith R. Porter, Chairman, Department of Biological Sciences, University of Maryland Baltimore County, Baltimore, MD 21228.** *UMBC is an Equal Opportunity/Affirmative Action Employer. Qualified women and minorities are encouraged to apply.*

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Associateship Programs - JH608-WR2A

National Research Council

2101 Constitution Avenue NW, Washington, D.C. 20418

ASSOCIATE SCIENTIST- NUCLEIC ACID CHEMISTRY

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

We are seeking a creative chemist capable of contributing to the development of DNA probe-based diagnostic technology. Responsibilities will include organic synthesis of nucleosides and nucleic acids (and their analogs) and study of the interaction of nucleic acids with DNA binding compounds (such as intercalators) and other substances.

The successful applicant will possess a Ph.D. with broad experience in the areas of organic synthesis and natural products chemistry. Familiarity with chemical manipulation of nucleosides and nucleic acids in both organic and aqueous media is desired. Expertise with spectroscopy, electrophoresis, and various chromatographic methods is additionally expected.

Please send your resume in confidence to:

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

E/O/E



ANIMAL IMMUNOLOGIST

The Eastman Chemicals Division of Eastman Kodak Company, a major manufacturer of chemicals, fibers, and plastics, has an opening for an animal immunologist in the Health and Nutrition Division of the Research Laboratories.

The position requires a PhD in immunology/molecular biology or related field and postdoctoral experience and training. Experience in veterinary immunology is also desirable. Position involves the development of fundamental and applied research in cell-mediated immunology with an emphasis on mechanisms involved in the prevention of disease in domestic animals. Responsibilities include the development of research and products involving immunoregulatory molecules of the immune system.

The Eastman Chemicals Division, which employs approximately 300 PhD scientists and engineers, is one of the largest chemical and fiber manufacturing facilities in the U.S. Kingsport is located in the Tri-Cities area of northeast Tennessee in the foothills of the Smoky Mountains. The region is rated among the top 25 most livable metropolitan areas and offers affordable housing, excellent schools, including a nearby state university, and low taxes. The pleasant four-season climate permits a variety of outdoor recreational opportunities: for example boating and fishing in the numerous lakes and streams or skiing and hiking in nearby mountains.



Interested candidates should send resumes to Betty DeVinney, Employment Services, Tennessee Eastman Company, P.O. Box 1975, Kingsport, TN 37662.

AN EQUAL OPPORTUNITY EMPLOYER

RESEARCH SCIENTIST AND ASSOCIATES IMMUNOLOGY/IMMUNOASSAY

An industry leader in advanced biotechnology, **Amgen** develops products for significant applications, including human therapeutics and diagnostics, and animal health care. We have immediate opportunities in our Immunology and Immunoassay Development areas for highly qualified staff who possess a record of research excellence.

Research Scientist: This position requires a Ph.D. in Immunology and several years experience in immunoassay development and hybridoma methodology. Postdoctoral and/or industrial experience is essential. (Dept. 43)

Research Associates: These positions require a BS or MS in Biology, Microbiology or Immunology. Several years experience in techniques in cellular immunology, mammalian cell culture and/or hematopoietic cultures is desirable. (Dept. 43a)

Amgen offers an attractive compensation and benefits package, and a dynamic and stimulating environment. Qualified candidates are requested to forward a resume and the names of three references to:

Recruitment (specify Dept. #)

**AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320**



Equal Opportunity Employer

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION DEPARTMENT OF ORAL PATHOLOGY AND GENETICS OF THE SCHOOL OF DENTISTRY UNIVERSITY OF MINNESOTA

Minimum qualifications are: D.D.S. (or D.M.D.) with advanced degree, or M.D. with advanced degree, or Ph.D. the position includes teaching and research. The applicant should have research expertise and experience in molecular biology, molecular genetics, pathology, or immunology.

The position is available after 1 January. Please send complete curriculum vitae, two letters of recommendation, and statement of career goals by 31 December 1986 to: **Dr. William Liljemark, School of Dentistry, University of Minnesota, Minneapolis, MN 55455.**

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

UNIVERSITY OF CONNECTICUT HEALTH CENTER FACULTY POSITION

Applications are invited for a tenure-track faculty position in the Department of BioStructure and Function. Responsibilities will include teaching of dental, medical and graduate students, student advising, research, and participation in enhancing a strong graduate research training program. The position is available at any level although preference may be given to more established investigators. Applicants must have a research doctorate, should be firmly committed to a career in teaching and have a strong research program in which excellence and independence have been demonstrated. Individuals who are investigating the phenomenon of information transfer via receptor-mediated signals are especially encouraged to apply.

Current interests in the department include macromolecular structure and function, epithelial-mesenchymal interactions in development, the molecular biology of chondrogenesis, trans epithelial transport of ions, neural mechanisms in gustation, neuromotor mechanisms of orofacial function, biological regulation of mineralization, regulation of leukocyte metabolism and secretion, and mechanisms of cell attachment and aggregation during development.

Applications containing curriculum vitae, a list of publications, three representative publications, a description of research interests, and three named references should be sent to: **Dr. Marvin L. Tanzer, Head, Department of BioStructure and Function, University of Connecticut Health Center, Farmington, CT 06032.** Closing date for applications is 31 December 1986.

An Affirmative Action/Equal Opportunity Employer, M/W/H.

ENVIRONMENTAL HEALTH. Faculty position, tenure-track. Teaching, advising, research, and service in comprehensive graduate and undergraduate area, experience in environmental health program administration, and college teaching desired. Curriculum vitae, official transcripts, and three reference letters to: **Dr. James Robertson, School of Allied Health Sciences, East Carolina University, Greenville, NC 27858.** *Equal Opportunity Employer.* Applications reviewed beginning 15 November and will continue until vacancy is filled. Telephone 919-757-6961 or write for detailed announcement.

The Department of Plant Biology, Carnegie Institution of Washington, invites applications for a **JUNIOR FACULTY RESEARCH POSITION.** We are particularly interested in individuals with research interests in molecular aspects of higher plant development, photobiology, or cell biology. Preference will be given to applicants with a strong background in the biology of higher plants. Postdoctoral experience desired. Applicants should send their curriculum vitae, available reprints and preprints, and a statement of research plans for the next few years. They should also arrange to have three letters of reference sent. Deadline: 1 December 1986. Address all materials to: **Dr. Winslow R. Briggs, Director, Department of Plant Biology, Carnegie Institution of Washington, 290 Panama Street, Stanford, CA 94305.** *The Carnegie Institution of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PLANT ECOLOGY

The Department of Botany, Louisiana State University (LSU), invites applications for a tenure-track position anticipated for August 1987, in the area of plant population biology. Preference will be given to candidates with an experimental emphasis and who complement existing programs within the department. A Ph.D. and evidence of research and teaching excellence are required. Responsibilities include establishing an active research program and directing Ph.D. students, in addition to teaching introductory and specialty courses. Review of applications will begin on 1 December 1986, and continue until the position is filled.

Send curriculum vitae and a brief statement of research goals, and arrange for three letters of reference to be mailed to: **Plant Ecology Search Committee, Department of Botany, LSU, Baton Rouge, LA 70803-1705.**

LSU is an Equal Opportunity Employer.

PLANT GENETICS and PLANT CELL or MOLECULAR BIOLOGY

The Department of Botany, Louisiana State University (LSU), invites applications for a tenure-track position anticipated for August 1987, emphasizing basic research in either (i) plant genetics (including molecular genetics) or (ii) plant cell or molecular biology. A Ph.D. before appointment, evidence of creative research, and quality and experience in teaching are required. Responsibilities include developing an active research program and teaching introductory and specialty courses. Review of applications will begin on 1 December 1986, and continue until the position is filled.

Send curriculum vitae and a brief statement of research goals, and arrange for three letters of reference to be mailed to: **Genetics/Cell/Molecular Committee, Department of Botany, LSU, Baton Rouge, LA 70803-1705.**

LSU is an Equal Opportunity Employer.

JUNIOR FACULTY OR RESEARCH ASSOCIATE position available to direct a core microchemical facility for protein and nucleic acid synthesis and analysis. Plan and conduct operations and computerized data handling in a laboratory equipped with an ABI peptide sequencer, amino acid analyzer, and peptide and oligonucleotide synthesizers. Requirements are a Ph.D. (or M.S.) with extensive experience in structural analysis of proteins, synthesis of peptides or oligonucleotides, and an interest in methods development in these areas. Opportunity to collaborate with other faculty and to develop an independent research program. Nontenure position with guaranteed support for 2 years. Salary is competitive and commensurate with qualifications. Submit curriculum vitae and names of three references to: **Dr. Douglas C. Wallace, Department of Biochemistry, Emory University School of Medicine, Atlanta, GA 30322.**

Emory University is an Affirmative Action/Equal Opportunity Employer.

The University of California, San Diego, Department of Chemistry, invites applications for a tenure-track position in biochemistry. The appointment most likely will be at the assistant professor level (\$29,800 to \$37,200). All applicants in the area of biochemistry will be considered. Candidates must have a Ph.D. and will be expected to develop a strong, independent, and creative research program. Teaching will be required at both the undergraduate and graduate levels in the general areas of biochemistry and molecular biology. Candidates should send curriculum vitae, a list of publications, reprints of representative papers, a summary of plans for their research program, and the names of three people who can be contacted for letters of recommendation to:

**Biochemistry Search Committee
c/o Department Chairman
Department of Chemistry, B-032
University of California, San Diego
La Jolla, CA 92093**

Prompt response is recommended, but all applications received by 15 November 1986 will be given thorough consideration. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CASE WESTERN RESERVE UNIVERSITY DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES TENURE-TRACK FACULTY POSITION AT THE ASSISTANT PROFESSOR LEVEL

The Department of Environmental Health Sciences, Case Western Reserve University School of Medicine, is seeking applicants for a tenure-track appointment at the assistant professor level in the area of RISK ASSESSMENT from candidates with demonstrated excellence in biostatistics or mathematical modeling and a strong background in chemistry, biochemistry, toxicology, or related life sciences.

This is a multidisciplinary department dedicated to fundamental research and its application to the solution of environmental health problems. The successful candidate will be expected to establish a strong independent research program and to participate in the education of graduate and medical students.

Applicants with at least 2 years of postdoctoral or equivalent experience are invited to send their curriculum vitae, a brief statement of research goals, and the names of three references by 1 December 1986 to:

**Chairman, Search Committee
Department of Environmental Health Sciences
Case Western Reserve University
School of Medicine
Cleveland, OH 44106**

The University is an Equal Opportunity/Affirmative Action Employer.

The Department of Biochemistry, University of Minnesota, St. Paul, expects to hire, in the next several years, at least **THREE FACULTY** with research interests in the general area of biochemistry and molecular biology of membrane-associated proteins. Areas of interest include hormone and neurotransmitter receptors, ion channels, membrane trafficking, membrane-associated cytoskeleton, and transmembrane signaling. One position, at either the assistant or associate professor level, will be available for the 1987 to 1988 academic year. Candidates should have a Ph.D. and at least 2 years of postdoctoral experience in biochemistry or related field. They will be expected to develop a vigorous, externally funded research program, and to contribute to undergraduate and graduate teaching.

Applicants should submit curriculum vitae, representative reprints, a brief outline of research plans, and three letters of reference no later than 1 December 1986 to: **Search Committee, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, MN 55108.** *The University of Minnesota is an Equal Opportunity Employer and Educator and specifically invites and encourages applications from women and minorities.*

ICHTHYOLOGY SCIENTIFIC ASSISTANT

The Department of Ichthyology of the American Museum of Natural History is seeking a scientific assistant to participate in its research programs and activities. Responsibilities will include assisting in data collection, identification of specimens, preparation of research materials and the management, preparation and maintenance of the department's collection of preserved fishes, skeletons, and facilities. Qualified candidates must have a baccalaureate degree in the biological sciences, background in ichthyology, experience handling scientific collections and equipment, manual dexterity, and be detail-oriented. Salary \$18,604 per annum. Excellent benefits. For consideration, please send résumé to: **Mr. Lee Vilensky, Personnel Department, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.** *An Equal Opportunity Employer.*

NMR SPECTROSCOPIST for research on biological membranes using CPDAS on carbon-labeled cofactors in membrane proteins and wideline deuterium on membrane fatty acids. Well-equipped solids and liquids NMR laboratory with microVAX interfaced spectrometers and advanced graphics. Liquid state experience desirable. Postdoctoral or research associate with salary depending on qualifications. Send curriculum vitae and three confidential letters of recommendation to: **Edward A. Dratz, Professor of Chemistry, Montana State University, Bozeman, MT 59717.**

Geisinger Clinic

RESEARCH SCIENTISTS

Staff Scientist and Senior Staff Scientist positions are available at the Weis Center for Research, a division of the Geisinger Clinic. The new Weis Center Research Building will be completed in March, 1987, and will accommodate 20 separate laboratories. Geisinger is affiliated with the Pennsylvania State University College of Medicine.

Candidates will hold a PhD or MD degree and bring 3 or more years of post-doctoral research experience. Employment should begin by July, 1987. The focus of the Center is cellular and molecular aspects of cardiovascular function and disease. Scientists with experience in molecular and cell biology, including cloning and sequencing, and expression of genes, membrane proteins and receptors, and immunology with an interest in research problems, broadly relevant to the cardiovascular system will be given preferential consideration.

Scientists are provided institutional funding for their salary and a liberal benefits program, and support of post-doctoral fellows, research technicians, supplies and equipment.

Applications will be accepted until the positions are filled. Send a summary of current research, curriculum vitae and a list of professional references to: **Howard E. Morgan, MD, Senior Vice President for Research, Weis Center For Research, (26-00), Geisinger Clinic, Danville, PA 17822.** Equal Opportunity Employer M/F/H/V

Geisinger

BIOCHEMIST/ MICROBIOLOGIST Ph.D.

A recognized leader in the Pharmaceutical industry, we currently have an excellent career opportunity available for a Ph.D. Biochemist/Microbiologist on our Manufacturing Technical Services Staff.

This position involves working with Research and Production personnel in scaling up processes to pilot plant or production levels. Interested candidates should have experience in purification of proteins including ultrafiltration, diafiltration, gel column chromatography, centrifugation also necessary. One or two years post doctorate experience in biological or sterile pharmaceutical production or development desirable.

In addition to the stimulating and rewarding assignments, this position offers an excellent opportunity for professional growth. If interested, send complete curriculum vitae with salary history to:

Mr. Gordon Gerhard
Manager, Personnel Relations

MERCK SHARP & DOHME

West Point, PA 19486

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

MSD
MERCK
SHARP &
DOHME

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

RESEARCH ASSISTANTS/ASSOCIATES AND LABORATORY ASSOCIATES

to join our highly skilled staff in Emeryville and participate in challenging research and development programs. Opportunities are available in the following areas:

MICROBIAL PHYSIOLOGY/FERMENTATION

Successful candidates will conduct experiments in one of the following areas: microbial or animal cell culture; production of enzymes, chemicals or recombinant proteins; protein purification/characterization; or microbial physiology. Positions require BS/MS in microbiology or biochemistry, with experience in microbiology, animal cell culture, or biochemistry.

PROCESS DEVELOPMENT

This position entails assisting in the development

of isolation/purification processes for recovering proteins from fermentation broth, on both a laboratory and pilot plant scale. Requires a BS in biology, biochemistry or chemical engineering with 1-3 years' experience in protein isolation.

MICROBIAL GENETICS

This individual will develop new strains for fermentation processes using traditional and recombinant approaches, e.g. gene cloning and expression, mutant isolation/characterization, RNA analysis, protein synthesis. Requires a BS/MS in molecular biology or related field plus at least 3 years' experience in molecular biology techniques. Experience in microbial genetics is desirable.

Cetus offers competitive salaries and excellent benefits. For confidential consideration, please send your resume to:

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

E/O/E



POSITIONS OPEN

The Department of Physiology and Molecular Biophysics, Baylor College of Medicine has a strong program in molecular excitability and is seeking additional **FACULTY** with expertise in this area. **Tenure-track** positions are available at all levels to applicants with research interests in, but not restricted to, the following special areas of investigation: ligand-gated membrane channels, signal transduction, developmental molecular genetics, real-time imaging of excitable cells, and ultrastructure. M.D. or Ph.D. in appropriate field required and approximately 4 years of postdoctoral training. Laboratory space and basic equipment provided and initial laboratory support available. Successful candidate will devote majority of his/her effort to establishing and maintaining an independent research program related to the main interests of the department. Send curriculum vitae, a brief description of past and present research experience, and names of three or more references to:

Dr. A. M. Brown, Professor and Chairman
Physiology and Molecular Biophysics Department
Baylor College of Medicine
Houston, TX 77030

Equal Opportunity/Affirmative Action Employer

GROSS ANATOMIST

Department of Surgery, University of California, San Diego (UCSD): Tenure-track assistant professor position open to teach gross anatomy at the UCSD School of Medicine beginning 1 July 1987. This is mainly a teaching and research position, with some administrative responsibilities. It requires interest and ability to teach in the Medical School Core Gross Anatomy course and to offer and participate in elective teaching. The candidate must have a Ph.D. in anatomy and research competence of a degree to allow independent productivity and effective cooperative undertakings with others. Send curriculum vitae and names of three academic references to: **N. A. Halasz, M.D., Professor and Head, Division of Anatomy, UCSD Medical Center, 225 Dickinson Street, San Diego, CA 92103.** Position closes 28 February 1987. Salary per published UC scale. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

IMAGING SCIENTIST

Faculty position for imaging scientist to do research and teach in new Biomedical Imaging Division. Individual desired whose area of interest would complement those of existing members of an active and growing biomedical imaging group composed of basic scientists and clinicians. Possible areas of interest of applicant: artificial intelligence; hardware design and development of image acquisition, analysis or display; development of mathematical methods for image processing and analysis. Modern image processing facilities available to the candidate. Joint appointment at nearby engineering school also possible. Rank and salary are negotiable, depending on background and experience of applicant. To apply send by 15 December 1986 curriculum vitae and names of three references to:

Dr. Fredric S. Fay
Director, Biomedical Imaging Group
University of Massachusetts
Medical Center
55 Lake Avenue North
Worcester, MA 01605

University of Massachusetts Medical Center is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGIST UNIVERSITY OF DENVER

The Department of Biological Sciences, University of Denver, seeks an assistant professor, tenure-track, with expertise in gene manipulation applied to problems of biological significance. She/he is expected to balance undergraduate and graduate teaching with research of high quality. Teaching responsibilities will include a course in molecular genetics, other courses dependent on research interests, but consistent with conducting a productive research program which draws extramural grant support and involves M.S. and Ph.D. students. Postdoctoral experience preferred. Please forward curriculum vitae, a statement of research plans, and names of three references by 15 December 1986 to: **Dr. Dennis Barrett, Department of Biological Sciences, University of Denver, Denver, CO 80208-0178.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MASS SPECTROSCOPIST. The Chemistry Department of Brown University is seeking applicants for the position of mass spectroscopist. Duties will include the operation and maintenance of a Kratos MS80RFA high resolution mass spectrometer. Minimum 3 years of experience with EI/CI, FAB, GC/MS, and HRMS is very desirable, as is familiarity with mass spectrometer hardware and software maintenance. Candidates should have a B.S. degree or higher in chemistry, biochemistry, or related fields. Submit curriculum vitae and three letters of recommendation to: **GC/MS Search Committee, c/o Professor David E. Cane, Chairman, Department of Chemistry, Brown University, Providence, RI 02912.** *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST EASTERN VIRGINIA MEDICAL SCHOOL

The Department of Microbiology and Immunology of the Eastern Virginia Medical School invites applications from molecular biologists for a tenure-track faculty position at the associate professor level. The successful candidate must have either a Ph.D. or M.D. degree with an active research program in the molecular mechanisms of pathogenesis or oncogenesis including a strong record of extramural funding. Applicants should have specific interests and expertise in the areas of recombinant DNA technology. We are particularly interested in the individual who would complement ongoing research in the areas of tumor biology, immunology, and virology. Excellent opportunities exist for collaborative interactions among basic science and clinical departments. Primary emphasis is on research, with limited participation in teaching basic and/or pathogenic microbiology to medical students, and teaching and training graduate students in cell and molecular biology. The basic science departments are in a major growth phase with emphasis on cell and molecular biology, which includes excellent incentives such as research space, new equipment, funds for initiation of research programs, and competitive salaries. Eastern Virginia Medical School is located within the lovely harbor district of Norfolk, Virginia, and is only minutes away from the Chesapeake Bay and Atlantic Ocean. Interested individuals should send curriculum vitae, three letters of recommendation, and a brief description of their current and future research activities to:

George L. Wright, Jr., Ph.D.
Professor and Chairman
Department of Microbiology and Immunology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA, 23501

An Affirmative Action/Equal Opportunity Employer

MOLECULAR BIOLOGISTS

As part of its ongoing expansion, the **Department of Microbiology and Immunology, University of Miami School of Medicine**, invites applications for two tenure-track faculty positions at the ASSISTANT PROFESSOR level. Molecular biologists are sought whose research interests concern the MOLECULAR BASIS of the PATHOGENIC PROPERTIES of BACTERIA, FUNGI, and PARASITES. Quality research facilities, start-up funds, and salary will be provided to the appointees. Applicants should have a Ph.D., M.D. or equivalent degree, several years of postdoctoral experience, a commitment to establishing an externally funded independent research program, and a willingness to participate in medical and graduate training programs. Interested applicants should send up-to-date curriculum vitae, a statement of current and future research goals, and the names of three references to: **Molecular Microbiology Search, University of Miami School of Medicine, Department of Microbiology and Immunology (R-138), P.O. Box 016960, Miami FL 33101.** Review of applications will continue until both positions are filled. *The University of Miami is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST

Ph.D. in molecular biology experienced in cDNA and genomic cloning. This challenging position also requires the candidate to develop innovative products. Salary range: \$38,000 to \$50,000, depending on experience. Please send résumé and references in confidence to: **Dr. Kenneth Fong, Clontech Laboratories, Inc., 4055 Fabian Way, Palo Alto, CA 94303.**

POSITIONS OPEN

MOLECULAR BIOLOGIST. The Department of Poultry Science at the University of Georgia is seeking applications for a 12-month, tenure-track faculty appointment initially budgeted at 80 percent research and 20 percent teaching. Applicants should have ability and background to develop an independent research program, funded in part by external funds, designed to apply monoclonal antibody, recombinant DNA, or other genetic engineering techniques to avian systems with an emphasis on immunology. Teaching responsibilities will involve the advising of both undergraduate and graduate students, as well as formal classroom instruction. Collaboration with other faculty members and interaction with poultry and agri-business industries in accomplishing the overall mission of the department will also be expected. Deadline for receipt of applications is 1 December 1986. Please submit a brief résumé, official transcripts, list of publications, and the names of four references to: **Dr. Jerry A. Cherry, Professor and Head, Department of Poultry Science, University of Georgia, Athens, GA 30602.**

MOLECULAR IMMUNOLOGIST The University of Chicago

Ben May Laboratory for Cancer Research

The Ben May Laboratory for Cancer Research of the University of Chicago is seeking applicants for a faculty position with a joint appointment in one of the basic science departments. Candidates should have sufficient research experience to demonstrate both significant accomplishment and outstanding promise. We are committed to developing a strong program in the fundamental aspects of the control of growth and differentiation of lymphocytes. Letters of application including curriculum vitae, bibliography, a brief statement indicating research interests, and the names of three references should be sent to: **Dr. Frank Fitch, Director, Ben May Laboratory for Cancer Research, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

NEUROBIOLOGISTS. Department of Anatomy has several tenure-track positions at the assistant and/or associate professor levels to expand its program in neurobiology. Preference will be given to candidates with experience in current cellular and molecular approaches to problems in the neurobiology of development, reproduction, regeneration, aging, and in neuroendocrinology (especially secretory processes of pituitary cells), or in other related areas of neuroscience. Excellent opportunities exist for research collaboration in university and medical center departments, endowed Centers for Research in Aging and Cancer, and a Magnetic Resonance Imaging facility. Successful candidates for associate professor positions will be expected to have a vigorous research program supported by extramural funding; those for assistant professors should have 2 to 3 years of postdoctoral training and show potential and commitment to develop such programs. The ability to contribute to teaching of professional and graduate courses in anatomy is also required. Excellent start-up funding, space, competitive salaries, and so forth, are available. Send curriculum vitae, description of research accomplishments, career objectives with research goals, and names of four references to: **Dr. M. B. Nikitovitch-Winer, Chair, Department of Anatomy, University of Kentucky Medical Center, Lexington, KY 40536,** by 15 December 1986. *Equal Opportunity Affirmative Action Employer.*

PHYTOPLANKTON ECOLOGIST. The University of Texas at Austin Marine Science Institute has an opening for a state-funded RESEARCH SCIENTIST. Preference will be given to candidates competent in the use of modern field and laboratory techniques to study phytoplankton and primary production in coastal waters and estuarine environments. Successful applicants are expected to obtain extramural funding to develop an independent research program and to cooperate in development of field-oriented multidisciplinary projects. Candidates must have a Ph.D. and record of research accomplishments. Postdoctoral experience preferred.

Send letter of application, statement of research interests, curriculum vitae, and names of three references before 15 January 1987 to: **Dr. Robert S. Jones, Director, Marine Science Institute, The University of Texas at Austin, Port Aransas, TX 78373.**

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

Nominations of eminent faculty are invited for:

ROBINSON PROFESSORS

A unique group of distinguished scholars committed to teaching undergraduates is forming at George Mason University. Robinson University Professors must be persons who transcend the boundaries of disciplinary scholarship and who are exploring large and fundamental questions in the liberal arts and sciences. They can hold departmental appointment, but they have a unique university-wide status.

Recently described by the *Wall Street Journal* as "a giant growing just outside Washington D. C.," George Mason is known for innovation and creativity. Its student population now exceeds 17,000.

Nominations for Robinson University Professors will be received at any time. They should be accompanied by a resume and sent to: **George W. Johnson**

President

George Mason University
4400 University Drive
Fairfax, Virginia 22030

AA/EOE

George Mason University

Inflammation/ Arthritis Research Opportunities



An equal opportunity employer

Pfizer Central Research, an industry leader in the area of inflammation/arthritis research, has several opportunities for scientists to contribute to the discovery of new antiinflammatory and antiarthritic drugs. You will supplement well established and growing teams of scientists in these areas and will work in newly constructed and well equipped laboratory facilities. Current therapeutic interests encompass innovative manipulations of the arachadonic acid cascade, immunological approaches to inflammatory diseases, mechanisms involved in pain perception and exploration of the gastrointestinal side effects on non-steroidal anti inflammatory drugs.

You should have a PhD in biochemistry, immunology, cell biology or an associated discipline, appropriate post doctoral training and be able to demonstrate a substantial level of accomplishment in your research endeavors. Previous industrial experience is welcome but not essential.

These positions offer excellent opportunities for professional recognition and career development. We offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, including the names, addresses and phone numbers of three professional references, to: J.K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

NIOSH ANNOUNCES RESEARCH AWARDS

FOR Ph.D. & M.D.
SCIENTISTS



The National Institute for Occupational Safety and Health announces outstanding opportunities for research in:

- bioengineering
- pathology
- biochemistry
- physiology
- immunology
- pharmacology
- mutagenesis
- epidemiology

The National Research Council in cooperation with the National Institute for Occupational Safety and Health, Division of Respiratory Disease Studies in Morgantown, West Virginia will offer competitive research awards in 1987 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at NIOSH. This program is open to experienced senior scientists as well as to recent PhD and MD graduates. Stipends begin at \$26,350 for recent graduates and are appropriately higher for seniors. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:
Associateship Programs (JH608/NI1)

National Research Council

2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Deadline for application
January 15.

Virogenetics Corporation

Albany, NY

The Virogenetics Corporation has been formed as a joint venture between the Institut Merieux and Health Research Incorporated (the non-profit research subsidiary of the NYS Department of Health). Virogenetics is involved in the development of therapeutic and diagnostic products for the human health care and veterinary markets.

Product development is currently under way within the context of strong basic research initiatives in cell biology, virology, immunology, and protein chemistry. Immediate openings are available at the PhD level in all of these disciplines. A major

focus is research and development of human animal vaccines utilizing viral vectors, with an emphasis on genetically engineered pox virus.

Compensation will be commensurate with qualifications. A comprehensive benefit package is included.

Please send a resume and references, along with salary history to:

**Director of Research
Virogenetics Corporation
Room 1315, Corning Tower,
Empire State Plaza
Albany, NY 12237**

An affirmative action/equal opportunity employer.

POSITIONS OPEN

PLANT POPULATION GENETICIST. Tenure-track assistant professor, fall 1987. Preference given to candidates who integrate theoretical, field, and experimental approaches. Send curriculum vitae, three reprints, a concise statement of research objectives, and three letters of recommendation to: **Dr. Alan P. Smith, Chairman, Search Committee, Department of Biology, University of Miami, Coral Gables, FL 33124.** Deadline 15 January 1987. *Affirmative Action/Equal Opportunity Employer.*

PHYSIOLOGICAL PSYCHOLOGY—SMITH COLLEGE: We anticipate approval for a tenure-track appointment as assistant professor in the Department of Psychology beginning in September 1987 for an initial term of 3 years. Smith College is a liberal arts institution dedicated to excellence in undergraduate education for women. We seek candidates with a Ph.D. in psychology who can successfully combine a strong interest in teaching with the ability to establish and pursue a program of research. Teaching assignments will include introductory and advanced courses in physiological psychology, as well as general introductory courses in psychology. Research facilities and some start-up funding are available. Submit curriculum vitae, a statement describing teaching and research experience and interests, reprints of recent publications and preprints of current work, and three letters of recommendation to: **Dr. Robert Teghtsoonian, Search Committee, Department of Psychology, Smith College, Northampton, MA 01063.** All documents must be received before 16 January 1986. *Smith College is an Equal Opportunity Employer. We encourage applications from women and minorities.*

PLANT CELL BIOLOGIST

The Department of Botany at the University of Wyoming invites applications at the rank of assistant or associate professor in plant cell biology. The position involves teaching at the undergraduate and graduate level, and the development of a vigorous research program. Candidates are sought who use modern approaches to address basic problems in the structure and function of plant cells. Active participation in interdepartmental programs in cellular/molecular biology is desired. A Ph.D. degree is required and postdoctoral experience is preferred. Salary will be commensurate with experience and qualifications. The appointment begins in August 1987. Qualified individuals should send a statement of research interests, curriculum vitae, graduate transcripts, and arrange to have three letters of reference sent by 15 January 1987 to: **Professor William A. Reiners, Head, Department of Botany, The University of Wyoming, Laramie, WY 82071.**

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

POSTDOCTORAL POSITION available for NIH-funded research on protein folding in two-chain, α -helical, coiled coil proteins. Experience in biochemistry/biophysical chemistry, especially protein preparation, purification, modification, and physical characterization (for example, CD) preferred. Send curriculum vitae with names and addresses of three references to: **Professor A. Holtzer, Department of Chemistry, Washington University, St. Louis, MO 63130.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION for 2 to 3 years. Available immediately to study the antigenic structure of intracellular parasite *Toxoplasma gondii*. Experience in isolation and characterization of proteins and or glycoproteins required. Send résumé and references to: **Dr. Jack S. Remington, Chairman, Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, CA 94301.** Telephone: 415-326-8120.

POSTDOCTORAL POSITION, YALE UNIVERSITY MOLECULAR BIOLOGY OF SODIUM TRANSPORT. Funded positions available for individuals with background in molecular biology, membrane transport, or physiology, to join multidisciplinary group studying the molecular basis of sodium transport using recombinant DNA methods, including recently cloned genes for Na,K-ATPase subunits. *Yale University is an Equal Opportunity Employer.* Contact: **Dr. E. J. Benz, Jr., or Dr. Joseph Hoffman, Department of Medicine, 802 LCI, P.O. Box 3333, New Haven, CT 06510.** Telephone: 203-785-4153.

POSITIONS OPEN

POSTDOCTORAL FELLOW—Available to start date anytime through September 1987. Research project can be in either of two areas: (i) isolation and characterization of genes which have a causal role in cellular senescence, or (ii) role of supercoiling and chromatin structure in controlling gene expression in human cells. Candidates with experience in recombinant DNA methods, tissue culture, and virology are favored, but those with strong credentials in other areas are encouraged to apply. Please send curriculum vitae, three letters of reference, and research interest to: **Dr. Bryant Villepon-teau, Institute of Gerontology, University of Michigan, 300 North Ingalls, Ann Arbor, MI 48109-2007.** *The University is a non-discriminatory, Affirmative Action Employer.*

POSTDOCTORAL POSITION AVAILABLE. A postdoctoral position is available immediately at the **Oak Ridge National Laboratory** to join well-established interdisciplinary group of biologists and physicists studying basic mechanisms of the action of ionizing radiation on DNA. Work will include irradiation of oligonucleotides in aqueous solution, analysis of fragmentation products, and correlation of results with predictions calculated with Monte Carlo computer simulation model. Appointment is for 2 years. Other well-qualified persons would also be considered for a temporary appointment. Salary dependent on qualifications. Interested individuals are invited to write for information to: **Training Office, University of Tennessee—Oak Ridge Graduate School of Biomedical Sciences, Biology Division, P.O. Box Y, Oak Ridge National Laboratory, Oak Ridge, TN 37831, or contact J. E. Turner, telephone: 615-574-6217, or R. J. M. Fry, telephone: 615-574-1252.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS (two) available as of January 1987, to study the role of growth factors in the control of proliferation of normal and neoplastic hepatocytes in culture. Techniques to be utilized include cell culture, protein chemistry, monoclonal antibodies, and recombinant DNA technology. Experience in some of these areas is desirable. Please send curriculum vitae and three letters of recommendation to: **Dr. George Michalopoulos, Associate Professor, P.O. Box 3432, Duke University Medical Center, Durham, NC 27710.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study muscle fiber types—development and neuronal regulation of myosin expression; methods include immunocytochemistry and electron microscopy. Background in muscle biology desirable. Send curriculum vitae and names of three references to: **Dr. G. F. Gauthier, Department of Anatomy, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION—MOLECULAR VIROLOGIST. Available immediately to work on HSV-1 latency, HTLV-1, and measles persistence. Applicants must have extensive training and experience in molecular biology. A background in virology, especially herpes simplex, is a plus, but is not required. The Virology Research Laboratory at the Cedars-Sinai Medical Center (CSMC) is a University of California, Los Angeles (UCLA)—affiliated hospital. Send curriculum vitae and three letters of recommendation to:

**Anthony B. Nesburn, M.D.
Steven L. Wechsler, Ph.D.
Virology Research Labs, CSMC
Halper Building, Room 116
8700 Beverly Boulevard
Los Angeles, CA 90048**

POSTDOCTORAL POSITION available immediately for a recent Ph.D. to participate in studies on the role of vitamin A in monocyte/macrophage differentiation. Background in molecular biology/immunology and familiarity with Western blots, cytotoxicity assays, and protein purification desirable. Salary: \$18,000 per year. Send curriculum vitae and three letters of reference to: **Dr. Kapil Mehtz, Department of Clinical Immunology and Biological Therapy, Box 41, M.D. Anderson Hospital, Houston, TX 77030.** *An Equal Opportunity/Affirmative Action Employer*

POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION in neurophysiology available to study the functional anatomy of limbic system pathways in the rat. The studies use in vivo intracellular recording and intracellular labeling with HRP. Knowledge of limbic system circuitry and experience with cellular neurophysiological recording preferred. Send curriculum vitae and names of references to: **David M. Finch, Brain Research Institute, University of California, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

Thrombosis Research Center. POSTDOCTORAL RESEARCH TRAINING POSITIONS are available 1 October 1986 for qualified candidate with M.D. or Ph.D. degree interested in blood coagulation and platelets. Experience in protein chemistry is highly desirable and training is offered in the biochemistry of coagulation proteins and interactions with platelets. Research projects may include, but are not limited to, studies of structure-function relationships and coagulation proteins, preparation and characterization of monoclonal antibodies to coagulation proteins, binding of coagulation proteins to platelets, characterization of platelet membrane receptors for coagulation proteins, and formal kinetic analysis of enzyme-substrate-cofactor interactions of coagulation proteins. Interested candidates must be citizens or permanent residents of the United States. Positions are offered for up to 3 years and are compensated by NIH grants. Qualified applicants should send curriculum vitae and names and addresses of three references to: **Dr. Peter N. Walsh, Thrombosis Research Center, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, PA 19140.** *Temple University is an Equal Opportunity Employer.*

PROTEIN CHEMIST

An opportunity is available for a biochemist with experience in protein structure studies. Candidate must have a doctoral degree in biochemistry and a minimum of 5 years of experience in the field of protein chemistry. Must be accomplished in the preparation of proteins and peptides by modern HPLC methods and the analysis of their composition and primary sequence. Must be experienced in the use of gas phase sequencer. Must be experienced in the use of computers to predict structure. Position is located in the Division of Medical Genetics, Department of Pediatrics, University of Southern California at Childrens Hospital of Los Angeles. Joint appointment in biochemistry is available. Excellent opportunities are available for collaboration and extension of interests to challenging cell biologic questions of protein translocation and membrane integration. Salary, academic rank, and tenure status are determined by experience and record of productivity. Send curriculum vitae, representative publications, statement of research interests, and names of three references to: **John A. Barranger, M.D., Ph.D., Head, Division of Human Genetics, Childrens Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027.**

Childrens Hospital of Los Angeles and the University of Southern California are Affirmative Action Employers.

OREGON REGIONAL PRIMATE RESEARCH CENTER REPRODUCTIVE BIOLOGIST

The Division of Reproductive Biology and Behavior of the Oregon Regional Primate Research Center has an opening for a reproductive biologist. Scientists who use molecular approaches in their research and who are interested in the male reproductive system are especially urged to apply. Candidates should also be interested in extending their research to nonhuman primates. Appointment will be at the level of assistant scientist (assistant professor) or above. Salary and rank will be commensurate with experience. Opportunities for joint appointments in relevant departments of the Oregon Health Sciences University are excellent. Applicants should send their curriculum vitae, the names of three references, and a summary of their future research goals to: **Dr. Robert M. Brenner, Head, Division of Reproductive Biology and Behavior, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006.** *The Oregon Regional Primate Research Center is an Equal Opportunity/Affirmative Action Employer.*

BIOGEN

is an international biotechnology company with laboratories in Switzerland, the United States and Belgium, involved in the development of pharmaceutical products through genetic engineering.

We are seeking

2 CELL BIOLOGISTS

to join our team in Geneva, and participate in a programme of research and development of lymphokines. Research will be centered on hormone receptor interactions and on cellular responses to hematological factors.

The ideal candidate holds a Ph.D. or equivalent and may have some postdoctoral experience.

We offer a challenging scientific career with opportunities to develop contacts with leading research laboratories.

Please submit your curriculum vitae, list of publications, and a list of three references to:

Rita Gloor, Personnel Manager
BIOGEN SA
46, route des Acacias
1227 CAROUGE-GENEVA
Switzerland

All replies will be considered in strict confidence.

CANCER RESEARCH SCIENTISTS

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

- 1) **Veterinary Pathologist**—experienced in rodent systems, familiar with AALAS & USDA regulations. GLP and GMP experience desirable. Must have good managerial skills.
- 2) **Monoclonal Antibodies**—scientists and technicians for development and screening of hybridomas producing anti-tumor antibodies.
- 3) **Tumor Cell Biologists**—scientists and technicians experienced in processing tumor specimens, establishing primary cell lines and xenografts in nude mice.
- 4) **Cellular Immunologists**—scientists with broad-based knowledge of lymphokines and cell-mediated cytotoxicity.
- 5) **Director, Technical Marketing and Contract Services**—to establish and maintain scientific and business collaborations, marketing of immunological products and contract research services. Should be experienced in the business and technical aspects of hybridoma technology, conventional and nude mice.

Robert K. Oldham, M.D.
Biotherapeutics Inc.
400 Eddy Lane
Franklin, Tn. 37064



Biotherapeutics Inc.

DIRECTOR, MATHEMATICAL AND PHYSICAL SCIENCES

The Office of Naval Research (ONR) is seeking an outstanding individual to serve in this Civil Service position in the Senior Executive Service. Salary range is \$61,296 to \$68,700, depending on qualifications. In addition to salary, career SES appointees are eligible to compete for performance awards and bonuses.

The Director, Mathematical and Physical Sciences supervises senior Scientific Officers and support personnel and is responsible for providing leadership, coordination and direction for ONR's \$70M basic and applied research programs in mathematics, physics, chemistry and electronics. With his/her staff, the Director formulates balanced and integrated policies and programs which constitute the long-range plans for contract research in the above fields. He/She exercises full authority in the allocation of resources to four subordinate divisions. The Director guides and directs the management and administration of these

divisions, evaluates their scientific and technological progress and ensures that the benefits of their research are made available to the Navy. He/She represents the fields at all levels of the Department of Defense and serves as the chief spokesperson for ONR's mathematical and physical sciences research, both nationally and internationally.

Candidates should possess a Ph.D. or equivalent experience with major research accomplishments as a physical or mathematical scientist with broad disciplinary interests and involvement. Considerable experience in the administration and management of research and its application to development is required.

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



Office of the Chief of Naval Research
Civilian Personnel Division, Code 01242P
ATTN: Announcement #86-86 (S)
800 North Quincy Street
Arlington, VA 22217-5000

U.S. Citizenship Required

An Equal Opportunity Employer

Applications will be accepted through 2 January 1987 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for in vitro studies of protein-DNA interactions (helicases and SSB) involved in replication and recombination. Experience in biochemical and biophysical investigations of macromolecular complexes is necessary; recombinant DNA techniques can be learned. Send curriculum vitae and names of three references to: **T. M. Lohman, Department of Biochemistry and Biophysics, Texas A&M University, College Station, TX 77843.**

POSTDOCTORAL POSITION available to study the metabolism of xenobiotics and steroid hormones by rat liver cytochrome P-450. The position is available immediately and pays \$18,000 to \$20,000 per annum. Send applications or requests for further information to: **Dr. Andrew Parkinson, Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, 39th and Rainbow, Kansas City, KS 66103. Telephone: 913-588-7512.**

RESEARCH AND SPECIAL PROJECTS COORDINATOR BIOTECHNOLOGY INSTITUTE THE PENNSYLVANIA STATE UNIVERSITY

The university invites applications for a research and special projects coordinator for institute members. Work includes proposal and newsletter preparation, speech writing, workshop coordination and oral presentations to faculty, industrial clients, and general public. Applicants with a Ph.D. and research or marketing experience in area relevant to biotechnology are preferred. Computer expertise, business knowledge, and grant experience helpful. Excellent writing and speaking abilities, plus exceptional communication and interpersonal skills are essential. Individual will report to the institute director, have considerable responsibility, and will be instrumental in continued development of major institute programs. Salary is competitive for this renewable position. Submit curriculum vitae and a brief description of relevant experience and arrange to have three letters of recommendation sent to: **Dr. Jean E. Brechley, Director of Biotechnology, The Pennsylvania State University, 105A South Frear Building, University Park, PA 16802.** Applications will be received until 1 November 1986, or thereafter until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT—For experiments in molecular biology including cloning, sequencing, and expression of human granulocyte genes. Candidate will be expected to develop a research area related to the interest of the laboratory and to develop independent projects. Candidate must be familiar with the current literature of molecular biology, and will be expected to remain current through participation in laboratory meetings, divisional seminars, and attendance at national meetings. M.S. degree in microbiology or biochemistry, plus 2 years of experience. Salary \$18,000 per year. Qualified applicants contact: **Dr. Thomas A. Rado, BOX 178, SCIENCE.**

An Equal Opportunity Employer

RESEARCH ASSOCIATE: Salary: \$17,000 per year, 9:00 a.m. to 5:00 p.m., Monday through Friday. M.D. or M.S. in pharmacology or biochemistry and 6 months of experience in pharmacokinetics, animal surgery, and use of radioisotopes required. Duties include: Planning, designing, and performing pharmacological studies in ionophore research and lipid metabolism and analyze the data. Submit résumé only to: **Job Service of Florida, 1350 NW 12th Avenue, Room number 280, Miami, FL 33242.** Reference: Job Order number FL4540429.

RESEARCH ASSOCIATE. Postdoctoral position available immediately for a plant physiologist or biochemist to investigate sucrose transport across sugar beet root vacuoles. Knowledge of biochemistry is required, and experience in subcellular fractionation, in vitro transport, and protein chemistry desired. Starting salary is \$21,804 per year. Applications in response to this advertisement must be marked 7E001. Deadline 28 November 1986, or until position is filled. Interested candidates should send a résumé including names of three references to: **Dr. Thomas J. Buckhout, Plant Photobiology Laboratory, BARC-West, U.S. Department of Agriculture (USDA)—Agricultural Research Service, Beltsville, MD 20707. Telephone: 301-344-3607.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH at The National Center For Toxicological Research. NCTR's research mission is to study the biological effects of potentially toxic chemicals. Doctoral degree within last 3 years preferred. Stipend is \$23,000 to \$30,000, depending on research area and experience. Contact: **ORAU Postgraduate Program at NCTR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831; telephone: 615-576-3190.** *Equal Opportunity Program open to U.S. citizens or PRA.*

RESEARCH ASSISTANT position available immediately in a molecular immunology laboratory. Job requires facility with basic biochemical procedures and some laboratory management skills. Significant prior laboratory experience required, preferably in the area of molecular cloning, DNA sequencing, protein purification, and tissue culture. Send résumé to: **Dr. A. Bothwell, Howard Hughes Medical Institute, Yale Medical School, 310 Cedar Street, New Haven, CT 06510.** *Equal Opportunity Employer.*

RADIATION THERAPY—UNIVERSITY OF PENNSYLVANIA. Laboratory scientists at assistant, associate, and/or full professor levels for expanding research program. Interest should be in radiobiology, cell biology, molecular biology, or protein chemistry. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.* Inquiries should be directed to: **John Biaglow, Ph.D., Radiation Therapy, 3400 Spruce Street, Philadelphia, PA 19104.**

RESEARCH ASSOCIATE POSITION

Postdoctoral position open January for study of hypothalamic peptide secretion in sheep. Background in neuroendocrinology, assay methodology, and surgery desirable. Send curriculum vitae and list of references by 15 November 1986 to: **Dr. Gary Jackson, Department of Veterinary Biosciences, University of Illinois, 2001 South Lincoln, Urbana, IL 61801; telephone: 217-333-0745.** *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH PLANT PHYSIOLOGIST for southwest Ohio education and research facility to carry out research program on distribution of assimilated carbon among receiving organs in legume plants; plan and execute experiments, analyze data, and prepare scientific manuscripts; design, test, and calibrate systems capable of supplying $^{14}\text{CO}_2$ to photosynthesizing plants; collect and analyze samples containing radioactive tracers; conduct studies in hydroponic rearing of legumes, operation of controlled growth room facility, autoradiography, microprocessor-controlled instrumentation, computer-assisted data acquisition, computer programming for data reduction, spreadsheet manipulation, and word processing. Requires Ph.D. in agronomy. No experience is required. Forty hours per week. Salary: \$19,316.35 per year. Qualified applicants only send résumé with this ad to: **B. Phillips, JO number 1062134, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

RESEARCH SCIENTISTS

Positions are available for highly motivated individuals with a background in cell biology at a new Massachusetts-based biotechnology company developing artificial internal organs which incorporate living cells. Current emphasis is on diabetes research with pancreatic islets and beta cells.

SENIOR SCIENTISTS—Ph.D. or M.D. with minimum of 2 years of postdoctoral research experience with mammalian cell systems. Familiarity with transplantation, diabetes research desirable.

LABORATORY MANAGER—Ph.D. or M.D. with strong publication record; minimum 4 years of postdoctoral experience with mammalian cell culture. Must possess managerial abilities. Familiarity with islet research desirable.

Submit résumé, salary history, and requirements and names of three references to:

**BioHybrid Technologies, Inc.
910 Turnpike Road
Shrewsbury, MA 01545
No telephone calls, please.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN IMMUNOLOGY. To use monoclonal antibodies as specific anti-functional reagents to identify molecules involved in tumor cell behavior. Ongoing projects include antibodies directed against the catalytic site of tumor-specific enzymes [*Cell* 45, 905 (1986)] and antibodies that inhibit spontaneous metastasis [*Int. J. Cancer* 38, 437 (1986)]. Experience in immunology desired. Salary will range from \$22,000 to \$25,000. Send letter of interest, curriculum vitae, and names of three references to: **Dr. James P. Quigley, Department of Pathology, State University of New York (SUNY)—Stony Brook, BHS Tower 9, Stony Brook, NY 11794.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK number 239.

RESEARCH GENETICIST—PLANTS

U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Cereal Crop Unit, Montana State University, Bozeman, MT, invites applicants for a GS-11/12 plant molecular genetics position to generate an improved understanding of molecular level aspects of variation and development in small grain cereals. Objectives include the creation of cDNA libraries for identification of genes that modify adaptation to environmental stress and to identify, characterize, and sequence DNA segments important in regulation of cereal development. The position will include technical assistance and a substantial research budget. Send inquiries and applications regarding announcement number 400-6-0091 to:

**Special Examining Unit
USDA, ARS Room 409
Building 003, BARC-W
Beltsville, MD 20705**

For additional information, telephone: **A. L. Scharen at 406-994-5158.**

SECTION HEAD/RESEARCH SCIENTIST

Require Ph.D./microbiology/genetics with 2 years of experience in area of job offered and 2 years of experience in general molecular research. Supervises major research projects principally involving the human papillomaviruses; develops rapid diagnostic methods for detecting human papillomaviruses in clinical samples; studies and researches role of human papillomaviruses in causing cancer of the human skin, principally the cervix; studies and analyzes clinical samples for the purposes of understanding the processes of cervical malignancy; engages in molecular cloning and DNA sequencing; researches nucleic acid and protein characterization; observes interaction of papillomaviruses with living tissues; classifies papillomaviruses into oncogenic and benign types; supervises and oversees other research scientists in the above outlined work. Applicants should have knowledge and ability to manipulate yeast microorganisms and familiarity with computer specification, database management, and programming. Salary \$48,731 per year, 40 hours per week—8:00–5:00. Qualified applicants should mail résumé and copy of ad to: **Department of Employment and Training, 1123 North Eutaw Street, Room 201-B, Baltimore, MD 21201; Job Order number 6030046; job location: Gaithersburg, MD.** *Equal Opportunity Employer, M/F/V/H.*

TWO BIOLOGY FACULTY POSITIONS

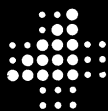
As part of a continuing program of growth and development, the **Boston College Biology Department** plans to fill two tenure-track positions at the assistant professor level by September 1987. One appointment will be in the area of mammalian physiology, and the other in the areas of virology, immunology, or molecular biology. See our ad in the 10 October *Science* for details.

We offer a competitive salary and start-up funds. Candidates should have a Ph.D. and several years of postdoctoral experience. Applications, including three letters of reference solicited by the candidate, should be submitted by 1 December 1986 to:

**Chairman, Biology Search Committee
Biology Department
Higgins Hall
Boston College
Chestnut Hill, MA 02167**

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

Career Opportunities



Micro Scan, a unit of Baxter Travenol Diagnostics Inc., develops and manufactures sophisticated computer controlled electronic instrumentation and disposables used in the clinical microbiology laboratory.

Our growth and expansion have created the following opportunities:

Manager of Microbiology

We are seeking an individual with experience in clinical microbiology, antibiotic sensitivity testing and rapid identification systems. Computer literacy strongly preferred. Ph.D in Microbiology required.

Immunology Project Leader

Ideal applicants will possess a Ph.D in Immunology with microbiology experience and exposure to immunochemistry. Knowledge of immunoassay development and surface matrix chemistry required.

Micro Scan offers an excellent salary and complete benefits portfolio. Our congenial work atmosphere is conducive to your professional growth and advancement. For immediate consideration, submit resume and salary history (note: principals only, please) indicating area of interest, to: **Director of Employee Relations, Micro Scan, 1584 Enterprise Blvd., West Sacramento CA USA 95691.** We are an equal opportunity employer m/f/h.

Micro Scan



UNIVERSITY OF BASEL, SWITZERLAND

The Medical Faculty and the Cantonal Hospital of Basel is seeking candidates for the new position of:

Professor of Pathophysiology and Chairperson of the Clinical Research Centre

The centre is actively engaged in clinically-oriented basic research in a variety of medical disciplines. Responsibilities include teaching and examination of medical and dental students in pathophysiology, maintenance of his/her own active research program and administrative coordination of the Research Centre.

The position requires an M.D. and/or Ph.D. with a distinguished academic career, research excellence, teaching experience and abilities (in German) and strong administrative and leadership skills.

Applicants should send a complete curriculum vitae with bibliography and names and addresses of 3 references by November 30, 1986 to:

**The Dean of the Medical Faculty
University of Basel
Hebelstrasse 25
CH-4031 Basel**

Further information can be obtained from Prof. H.P. Rohr, Medical Director of the Cantonal University Hospital, CH-4031 Basel.

DEAN, COLLEGE OF SCIENCE

Drexel University invites nominations and applications for the position of Professor and Dean of Science. Drexel is a private nonsectarian institution which emphasizes programs in science and technology and is a leader in cooperative education. It has an attractive modern campus in the University City area of Philadelphia and enrolls over 13,000 graduate and undergraduate students in its 7 colleges. The College of Science includes the Departments of Bio-science and Biotechnology, Chemistry, Mathematics and Computer Science, Nutrition and Food Sciences, and Physics and Atmospheric Science, as well as associated Programs in Biomedical Science and Environmental Science. With a faculty of 91, an enrollment of over 850 science majors, and external research funding of \$3 million per year, this growing college seeks a dynamic and innovative Dean.

The Dean is the college's academic leader and chief administrator, it's prime advocate to the University. The Dean reports directly to the Vice President for Academic Affairs and is responsible for administering all aspects of the college, for evaluation of all academic programs and faculty, and for providing leadership and guidance in research and curriculum development.

The successful candidate must have an earned doctorate in an appropriate science discipline, should have demonstrated management experience with creative people, and a record of teaching, research, and scholarly achievement appropriate for tenure in one of the departments of the college. Appointment is for 12 months, effective on or after July 1, 1987. Salary is highly competitive. A letter of application, including a resume, or a letter of nomination, should be postmarked by December 15, 1986 and sent to:

Chairperson, Dean of Science Search Committee
c/o The Office of Vice President for Academic Affairs
Drexel University, Philadelphia, Pennsylvania 19104

**DREXEL UNIVERSITY IS AN EQUAL OPPORTUNITY
AFFIRMATIVE ACTION INSTITUTION AND INVITES
APPLICATIONS FROM MINORITIES AND WOMEN**

PH.D. BIOCHEMIST/ IMMUNOCHEMISTRY

Abbott Laboratories claims its position as the world leader in the burgeoning field of medical diagnostics through superior new product development. The research challenge is being met more aggressively than ever through our Diagnostics Division, the fastest growing segment of our \$3.5 billion corporation. As we continue pursuing new immunoassay tests, we now seek a Biochemist to join this innovative organization.

This individual will be involved in protein purification and immunoassay development in HTLV III and Hepatitis B research areas. You will need a Ph.D. in Biochemistry or Immunology, plus at least 2 years related postdoctoral experience. We would prefer a strong immunological background with some supervisory experience.

In addition to our advanced scientific environment, Abbott offers an excellent salary and full benefits including stock purchase plan and profit sharing. Our headquarters is located in an attractive suburban setting on the Lake Michigan shoreline, just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Stephanie Mondello/Corporate Placement, Dept. SM/10-31.** Abbott is an Affirmative Action Employer.

ABBOTT
ABBOTT PARK IL 60064
"HEALTH CARE WORLDWIDE"

POSITIONS OPEN

RESEARCH ASSOCIATE responsible for molecular genetic analysis of human myeloma tumor cells: Detection of aberrations at specific oncogene and other functionally relevant gene loci by Southern blotting techniques. Analysis of immunoglobulin rearrangement patterns in order to assess the origin, stage of differentiation, and blotting techniques. Recombinant DNA cloning, gene library techniques. Background in human B-lymphoid cell neoplasm. Ph.D. degree in biochemistry or related field with 3 years of research training. Salary: \$22,000 annual salary. 40 hours per week. Contact: **Texas Employment Commission, Houston, Texas, or send résumé to Texas Employment Commission, Placement Unit, Austin, TX 78778, J.O. number 4274874. Ad Paid for by An Equal Opportunity Employer.**

Immediate Multiple Positions: SCIENCE DIRECTOR; AND RECOMBINANT, MONOCLONAL, AND TISSUE CULTURE SCIENTISTS; AND FDA PRODUCTION MANAGER. Start-up Biotechnology company has a major recombinant product; doing R&D with Fortune 100 company, including earth orbit applications in space. Clinicals start soon. Applicants to be: quality people, positive, good natured, result oriented, self starting, committed to private sector, and have the "right stuff". Prefer experience with marrow growth factors such as EPO, CSF, GM-CSF. This is a rare ground floor opportunity. Join us. Résumé to:

**Elanex Pharmaceuticals, Inc.
Suite 115, 22121 17th Avenue, SE
Bothell, WA 98021**

PROGRAM

ECONOMIC IMPACTS OF NATIONAL DEFENSE is the subject of a new research effort in the Carnegie Mellon University Program on International Peace and Security. Support is available for one or more qualified postdoctoral or advanced doctoral students. Send résumé including educational background and list of publications to: **Professor Lester Lave, GSIA, Carnegie Mellon University, Pittsburgh, PA 15213. Telephone: 412-268-8837.**

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON HEMOSTATIC IMPAIRMENT ASSOCIATED WITH VIRAL HEMORRHAGIC FEVER IMPAIRMENT, Frederick, Maryland, 26 to 29 May 1987. This symposium, sponsored by the United States Army Medical Research Institute of Infectious Diseases, will review the pathogenesis of viral hemorrhagic fevers with emphasis on the hemorrhagic syndrome. Since attendance will be limited, interested investigators should contact the following as soon as possible: **Hemostasis Conference, Medical Division, USAMRIID, Ft. Detrick, Frederick, MD 21701.** Proceedings will be published.

LECTURESHIPS

THE UNIVERSITY OF CHICAGO POSTDOCTORAL LECTURESHIPS VERTEBRATE BIOLOGIST

Twelve-month positions for 1987 to 1988 to begin anytime between July and September 1987 and renewable for one additional year. The successful candidates will share responsibility with departmental faculty for laboratory instruction and assistance in the department's human morphology course. This commitment requires about 150 contact hours (average 2.5 afternoons per week) over the fall and winter quarters. The successful candidates are expected to pursue their research interests with a departmental faculty member during the rest of the year.

Applicants must have completed the Ph.D. and a course in human gross anatomy. Send curriculum vitae, statement of research interests, and three letters of reference to: **Dr. Philip S. Ulinski, Department of Anatomy, The University of Chicago, 1025 East 57th Street, Chicago, IL 60637, by 15 January 1987.**

The University of Chicago is an Equal Opportunity Employer; women and members of minority groups are specifically encouraged to apply.

TRAINING PROGRAM

GRADUATE TRAINING PROGRAM IN NEUROSCIENCE—The Neuroscience Program at The Milton S. Hershey Medical Center of The Pennsylvania State University has assistantships available in September 1987. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience after 4 years of study. A master's degree program is also available. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, and cerebral metabolism. Interested candidates are invited to apply to: **Dr. Robert Page, Chairman, Neuroscience Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, PA 17033. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

TWO POSTDOCTORAL FELLOWSHIPS AVAILABLE. Developmental neurobiology of monoamine and peptide neurotransmitters in the CNS using organ culture, immunocytochemistry, radioimmunoassay, and in situ hybridization. Available immediately. Contact: **Dr. G. Miller Jonakait, Department of Biological Sciences.**

Cellular neuroendocrinology of steroid-dependent systems in CNS using steroid autoradiography, retrograde neuroanatomical tracing, immunocytochemistry, and in situ hybridization. Available 1 June 1987.

Contact: **Dr. J. I. Morrell, Institute of Animal Behavior, Rutgers University, 101 Warren Street, Newark, NJ 07102. Rutgers University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP IN THE CELLULAR AND MOLECULAR ASPECTS OF REPRODUCTIVE BIOLOGY, University of California, Davis Campus. Fellowship available in spring 1987 in an NIH-funded training program. Faculty include: cell biology and biochemistry of gametes and fertilization (D. Katz, J. Hedrick, S. Meizel, R. Nuccitelli); cell biology and morphology of implantation, placenta and early development (G. Anderson, A. Enders, A. Hendrickx, B. King); and cellular endocrinology (J. Turgeon). Candidates must be U.S. citizens or permanent residents and, at time of appointment, must have doctoral degree with LESS than 1 year of postdoctoral training. Send curriculum vitae and a statement of research interests to: **Dr. Stanley Meizel, Director, Reproductive Biology Training Grant, Department of Human Anatomy, School of Medicine, University of California, Davis, CA 95616. The University of California is an Equal Opportunity Affirmative Action Employer.**

The University of California **PRESIDENT'S FELLOWSHIP PROGRAM, 1987-1988.** The University of California is seeking minority and women applicants for postdoctoral fellowships. Appointments are for one academic year with possible renewal. Stipends are \$22,000 to \$28,000, with additional funds for research expenses. Applicants must be U.S. citizens or permanent residents and, hold a Ph.D. from an accredited university. Preference is given to minority and women candidates in mathematics and computer science, engineering, physical sciences, life sciences, and business. *Applications from minority candidates in other disciplines in which they are underrepresented are also encouraged.* For further information and application materials, write to: **The President's Fellowship Program, University of California, 359 University Hall, Berkeley, CA 94720, or telephone: 415-643-6507. The application deadline is 5 January 1987. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP IN BIOCHEMISTRY available January 1987. Experience in techniques of proteoglycan biochemistry, protein analysis, and tissue culture desirable. Applicant with Ph.D. or clinical doctorate should send letter, curriculum vitae, and names of three referees to: **K. E. Kuettner, Ph.D., Biochemistry Department, Rush-Presbyterian-St. Luke's Medical Center, 1753 West Congress Parkway, Chicago, IL 60612. Rush is an Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

U.S. Department of Energy (DOE), Office of Health and Environmental Research—ALEXANDER HOLLAEENDER DISTINGUISHED POSTDOCTORAL FELLOWSHIP PROGRAM. Provides research opportunities in energy-related life, biomedical, and environmental sciences. Tenable at participating DOE laboratories and approved universities. Stipend is \$35,000. Applicants must hold a doctoral degree received between 1 April 1985 and 30 September 1987. U.S. citizenship or PRA status required. Deadline is 20 January 1987. Contact: **Hollaender Postdoctoral Fellowships, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117; telephone: 615-576-3190.**

MID-CAREER SABBATICAL FELLOWSHIP

The John D. and Catherine T. MacArthur Foundation Mental Health Research Network on Determinants and Consequences of Health-Promoting and Health-Damaging Behavior solicits applicants with Ph.D., M.D., or equivalent degree, and who have had at least 5 to 7 years of postdoctoral experience. Applicants must have a significant publication record in behavioral, biological, or medical research. They must describe, in one or two pages, a research training experience they wish to acquire in one or more of the following areas of health and behavior research: stress and disease (especially cancer, diabetes, or cardiovascular disease); health promotion and disease prevention; weight regulation; sex differences in health and illness. Our interests in these areas range from basic biological mechanisms to sociocultural variables in health and illness. The training experience will be for a period of 12 to 24 months and will take place at two or more of the eight sites of the Network: Duke, Karolinska, Rutgers, University of Pennsylvania, University of California at Los Angeles and San Francisco, University of Pittsburgh, and Yale. Preference will be given to established, mid-career investigators interested in interdisciplinary research and wanting to shift into the health and behavior area, especially in conjunction with a partially supported sabbatical year. Please address letters of inquiry, a 1 to 2 page statement of focused goals and curriculum vitae before 14 November 1986 to: **Judith Rodin, Ph.D., Yale University, Department of Psychology, Box 11A Yale Station, New Haven, CT 06520. For inquiries telephone: Debbie Whitney-Saltiel, M.P.H., 203-432-4614. Fuller applications will be solicited after reviewing the initial letters of inquiry and goal statements.**

RESEARCH FELLOWSHIPS IN GERONTOLOGY—Postdoctoral and predoctoral research fellowships, supported in part by training grants from the National Institute on Aging, are available at The University of Michigan Institute of Gerontology. Stipends, tuition, fees, and travel support will be provided to qualified applicants. Prospective faculty mentors represent the behavioral, biological, clinical, and social sciences and the humanities, as follows: **W. A. ACHENBAUM, Ph.D.; R. C. ADELMAN, Ph.D.; DAVID AMINOFF, Ph.D., D.Sc.; B. J. COHEN, D.V.M., Ph.D.; J. A. FAULKNER, Ph.D.; B. E. FRIES, Ph.D.; A. GAFNI, Ph.D.; J. B. HALTER, M.D.; A. R. HERZOG, Ph.D.; T. Hickey, Dr.P.H.; J. S. HOUSE, Ph.D.; N. KRAUSE, Ph.D.; J. KUWADA, Ph.D.; J. LIANG, Ph.D.; M. A. PERLMUTTER, Ph.D.; L. M. VERBRUGGE, Ph.D.; B. VILLENPONTEAU, Ph.D.; T. J. WELLS, R.N., Ph.D.; T. P. WHITE, Ph.D.** Candidates should forward a letter of interest, complete curriculum vitae, bibliography, and identification of potential faculty mentor to: **Jane Ketchin, Institute of Gerontology, The University of Michigan, 300 North Ingalls, Ann Arbor, MI 48109-2007. Candidates should also arrange for delivery of official copies of graduate transcripts and at least three letters of recommendation. The University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP available to study (i) protein-DNA interactions during site-specific recombination in yeast or (ii) photoregulation of gene expression in *Phycomyces*. Salary \$17,000 to \$23,000, depending on qualifications. Some experience in protein biochemistry/immunology preferred. Send curriculum vitae to: **Dr. M. Jayaram, Department of Molecular Biology-2, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, CA 92037; telephone: 619-455-8009.**

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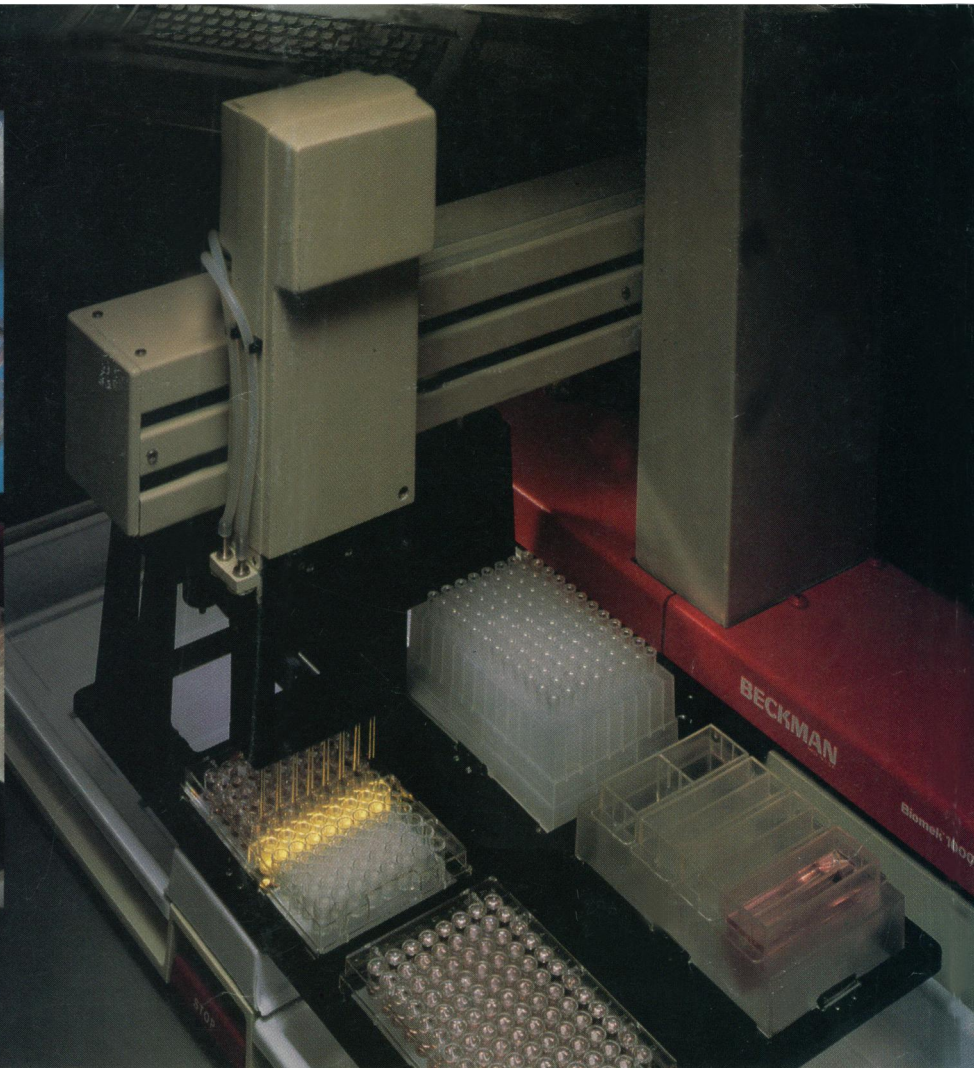
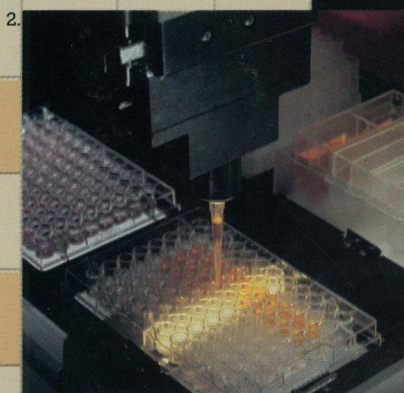
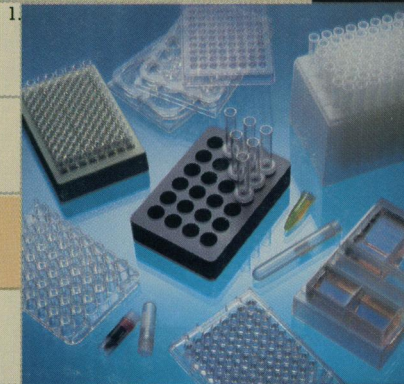
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