

author does not attempt to evaluate the work of others. Rather he provides a précis of their major conclusions. In so doing he has largely avoided bias in the overall presentation at the expense of a more concise synthesis.

The reader should be aware that species names mentioned in the book are those used in the cited articles; thus, the same species can appear with two or three different generic names. There are several glaring errors in the references and figure captions.

In summary Anderson's book provides an excellent reference and introduction to the literature on radiolaria. It bridges the disciplinary gap between the cell biologist, the ecologist, and the paleontologist and encourages further research that will lead to a better understanding of this long-ranging, diverse, and somewhat mysterious group of single-cell organisms.

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Centuries of Geology

It Began with a Stone. A History of Geology from the Stone Age to the Age of Plate Tectonics. HENRY FAUL and CAROL FAUL. Wiley-Interscience, New York, 1983. xviii, 270 pp., illus. \$38.95; paper, \$23.95.

The subtitle of this book written by Henry Faul and completed after his death by his wife indicates an immensely ambitious project: "A History of Geology from the Stone Age to the Age of Plate Tectonics." To accomplish this in a mere 230 pages of text calls for a choice between detailed treatment of a few key episodes and more or less uniform compression. Unfortunately Faul chose the latter course. I say unfortunately because the end product is a pedestrian recitation of events almost completely devoid of material to engage the intellect or stimulate the imagination.

For the early history, for which our knowledge remains sketchy, this approach proves more or less adequate, with the usual acknowledgement of the contributions of a succession of important figures, from Theophrastus and Pliny to Steno and Hooke. It is from the more thickly populated 18th century onwards that the method starts to come unstuck. In the first place, there are notable omissions or examples of excessive compression. How can a serious history of geology afford to ignore the work of, for instance, von Buch or Elie de Beaumont in Europe or T. C. Cham-

berlin in North America? Dana's research on coral reefs is noted, but his fundamental contributions to geotectonics are neglected. No consideration is given to the nappe theory of the Alps, which was of immense significance in its time. As for the 20th century, half a dozen pages is all there is to be found on subjects as momentous as radiometric dating, continental drift, and plate tectonics.

In the second place, and perhaps more serious, Faul almost totally ignores the recent reevaluations by historians of science, who attempt to place leading thinkers in their social and intellectual milieu, the better to understand the interplay of empirical discovery, new ideas, research techniques, and personal rivalries. Instead he is content to accept the conventional wisdom largely dating back to Lyell's tendentious and now somewhat discredited account of the history of geology. Thus no one would appreciate from this book that it was the Wernerians who represented the scientific mainstream, with Hutton a rather isolated and atypical figure, or that Lyell's insistence on an extreme version of uniformitarianism was strongly attacked on good grounds by contemporary scientists of considerable stature. Nowhere in the book, in fact, is there an adequate explication of the development of geological thinking on particular subjects—things apparently just happened in succession, and we are evidently not meant to concern ourselves with the whys and wherefores.

For the reader lacking any prior knowledge of the history of geology this account may provide a helpful primer, particularly if use is made of the extensive reference list, but the more ambitious and discerning had better look elsewhere.

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Books Received

Acquisition of Mathematics Concepts and Processes. Richard Lesh and Marsha Landau, Eds. Academic Press, New York, 1983. xiv, 410 pp., illus. \$39. Development Psychology Series.

Adaptations to Terrestrial Environments. N. S. Margaris, M. Arianoutsou-Faraggitiaki, and R. J. Reiter, Eds. Plenum, New York, 1983. viii, 247 pp., illus. \$39.50. From a symposium, Khalkidiki, Greece, Sept. 1982.

Advanced Organic Chemistry. Part B, Reactions and Synthesis. Francis A. Carey and Richard J. Sundberg, 2nd ed. Plenum, New York, 1983. xxii, 650 pp., illus. \$59.50; paper, \$16.95.

Bird Conservation I. Stanley A. Temple, Ed. Published for the International Council for Bird Preservation, United States Section, by University of Wisconsin Press, Madison, 1983. viii, 148 pp., illus. Paper, \$12.95.

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Cartilage. Brian K. Hall, Ed. Academic Press, New York, 1983. Vol. 1, Structure, Function, and Biochemistry. xvi, 385 pp., illus. \$55. Vol. 2, Development, Differentiation, and Growth. xiv, 409 pp., illus. \$55.

Current Issues in Clinical Psychology. Vol. 1. Eric Karas, Ed. Plenum, New York, 1983. xii, 301 pp. \$42.50. From a course, Merseyside, U.K., Sept. 1981.

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Cytopathology of Parasitic Disease. Pitman, London, 1983 (U.S. distributor, CIBA Pharmaceuticals Company, West Caldwell, N.J.). viii, 273 pp., illus. \$35. Ciba Foundation Symposium 99. From a symposium, Caracas, Venezuela, Nov. 1982.

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Groundwater Contamination in the United States. Veronica I. Pye, Ruth Patrick, and John Quarles. University of Pennsylvania Press, Philadelphia, 1983. xxii, 315 pp. \$35; paper, \$14.95.

A Guide to Man-made Gemstones. Michael O'Donoghue. Color photography by Edward Gübelin. Van Nostrand Reinhold, New York, 1983. 223 pp. + plates. \$35.50.

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Hazardous Waste in America. Samuel S. Epstein, Lester O. Brown, and Carl Pope. Sierra Club Books, San Francisco, 1983 (trade distributor, Random, New York). xiv, 593 pp. Paper, \$12.95. Reprint, 1982 edition.

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Methods in Fruit Breeding. James N. Moore and Jules Janick, Eds. Purdue University Press, West Lafayette, Ind., 1983. xvi, 464 pp., illus. \$40.

(Continued on page 979)

(Continued from page 925)

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6 August. Structure of water (M. Klein, discussion leader): S. A. Rice, "A review of theoretical models of water"; B. Berne, "Quantum effects on the structure of water"; R. Watts, "Infrared spectroscopy and structure of small clusters of water molecules." Solute-solvent interactions (D. Chandler, discussion leader): H. C. Andersen, "Molecular dynamic simulations of hydrophobic hydration"; A. Ben-Naim, "Thermodynamics of solvation of simple solutes—a new approach to an old problem."

7 August. Supercooled water and aqueous solutions (J. Texeira, discussion leader): P. A. Egelstaff, "Neutron scattering of water below room temperature"; H. E. Stanley, "Mysterious behavior of supercooled water"; R. J. Speedy, "Solute effects in supercooled water." Ion-ion interactions (H. L. Friedman, discussion leader): P. Rossky, "Integral equation approaches to the structure of ionic solutions"; G. N. Patey, "Theoretical predictions of equilibrium and dynamic properties of aqueous electrolyte solutions."

8 August. Water near interfaces (A. Angell, discussion leader): A. Parsegain, "Molecular hydration forces"; S. Marcelja, "Surface-induced structure in water and in electrolytes"; D. K. Ross, "Interactions of water with surfaces and their associated counter ions." Properties of aqueous solutions (C. Jolicoeur, discussion leader): F. Wanderlich, "Dynamical behaviour and hydrodynamic of electrolytic solutions"; G. Zundel, "Solvate structures of hydrogen-bonded systems and the dissociation of acids."

9 August. Phase equilibria and critical phenomena (S. H. Chen, discussion leader): M. Kahlweit, "Phase equilibria and tricritical points in quaternary liquid systems"; S. Safran, "Phase transitions of structure in microemulsions"; J. Wheeler, "Phase transitions in H-bonded systems." Poster sessions (S. H. Chen, chairman). Special lecture (J. E. Desnoyers, discussion leader): C. Richardson, "Measurement of the thermodynamic properties of supersaturated aqueous solutions using single droplet levitation."

10 August. Structure and stability of micelles (D. F. Evans, discussion leader): K. Dill, "Interaction among amphiphilic molecules in water"; W. Gelbart, "Micelle structure and phase transitions in aqueous soap solutions."

Mild Hypertension. Recent Advances. Franz Gross and Toma Strasser, Eds. Raven, New York, 1983. xvi, 429 pp., illus. \$45. From a symposium, Birmenstok, Switzerland, Sept. 1982.

Mineral Deposits of the Alps and of the Alpine Epoch in Europe. Hans-J. Schneider, Ed. Springer-Verlag, New York, 1983. xvi, 402 pp., illus. \$42.50. Special Publication No. 3 of the Society for Geology Applied to Mineral Deposits. From a symposium, Berchtesgaden, Germany, Oct. 1981.

Mountains of the Middle Kingdom. Exploring the High Peaks of China and Tibet. Galen Rowell. Sierra Club Books, San Francisco, 1983 (trade distributor, Random, New York). xvi, 191 pp., illus. \$40.

Naturalist on Watch. Alton A. Lindsey. Merry Lea Environmental Learning Center, Goshen College, Goshen, Ind., 1983. viii, 220 pp., illus. \$10; paper, \$4.75.

Neural Tissue Transplantation Research. Robert B. Wallace and Gopal D. Das, Eds. Springer-Verlag, New York, 1983. xii, 243 pp., illus. \$42.50. Proceedings in Life Sciences. From a symposium, Los Angeles, 1981.

Organometallic Compounds. Synthesis, Structure, and Theory. Bernard L. Shapiro, Ed. Published for the IUCCP by Texas A&M University Press, College Station, 1983. xxviii, 481 pp., illus. \$35. From a symposium, College Station, Tex., April 1983.

Origins of Intelligence. Infancy and Early Childhood. Michael Lewis, Ed. 2nd ed. Plenum, New York, 1983. xvi, 535 pp., \$29.50.

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Pascal Programming. A Beginner's Guide to Computers and Programming. Chris Hawksley. Cambridge University Press, New York, 1983. xiv, 188 pp., illus. \$24.95; paper, \$9.95.

Psychological Perspectives on the Self. Vol. 2. Jerry Suls and Anthony G. Greenwald, Eds. Erlbaum, Hillsdale, N.J., 1983. xii, 287 pp., \$29.95.

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Quantum Optics, Experimental Gravity, and Measurement Theory. Pierre Meystre and Marlan O. Scully, Eds. Plenum, New York, 1983. xii, 701 pp., illus. \$95. NATO Advanced Science Institutes Series B, vol. 94. From an institute, Bad Windsheim, Germany, Aug. 1981.

The Quantum Theory of Light. Rodney Loudon. 2nd ed. Clarendon (Oxford University Press), New York, 1983. xiv, 393 pp., illus. \$59.95; paper, \$24.95.

Racing Alone. A Visionary Architect's Quest for Houses Made with Earth and Fire. Nader Khalili. Harper and Row, New York, 1983. x, 241 pp. \$14.95.

Readings in Tumor Virology. Harold Varmus and Arnold J. Levine, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. xx, 1133 pp., illus. Paper, \$39.50.

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The Reticuloendothelial System. A Comprehensive Treatise. Vol. 5, Cancer. Ronald B. Herberman and Herman Friedman, Eds. Plenum, New York, 1983. xx, 356 pp., illus. \$45.

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Eds. Elsevier, New York, 1983. xii, 415 pp., illus. \$60.

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Statistics on Spheres. Geoffrey S. Watson. Wiley-Interscience, New York, 1983. xii, 238 pp., illus. Paper, \$21.50. University of Arkansas Lecture Notes in the Mathematical Sciences, vol. 6.

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Stochastic Processes. Formalism and Applications. G. S. Agarwal and S. Dattagupta, Eds. Springer-Verlag, New York, 1983. vi, 324 pp., illus. Paper, \$16.50. Lecture Notes in Physics, vol. 184. From a school, Hyderabad, India, Dec. 1982.

Stonehenge Complete. Christopher Chippindale. Cornell University Press, Ithaca, N.Y., 1983. 296 pp., illus. \$29.50.

The Structural Basis of Neurobiology. Edward G. Jones, with a chapter by Leon Weiss. Elsevier, New York, 1983. Various pages, illus. Paper, \$19.95. Reprinted from *Histology* (1983).

The Sun Is Feminine. A Study on Language Acquisition in Bilingual Children. Traute Taeschner. Springer-Verlag, New York, 1983. xii, 246 pp., illus. \$39. Springer Series in Language and Communication, vol. 13.

The Use of Human Cells for the Evaluation of Risk from Physical and Chemical Agents. Amleto Castellani, Ed. Plenum, New York, 1983. xii, 809 pp., illus. \$110. NATO Advanced Science Institutes Series A, vol. 60. From an institute, Pisa, Aug. 1981.

Utilization of Mammalian Specific Locus Studies in Hazard Evaluation and Estimation of Genetic Risk. Frederick J. de Serres and William Sheridan, Eds. Plenum, New York, 1983. x, 341 pp., illus. \$45. Environmental Science Research, vol. 28. From a workshop, Research Triangle Park, N.C., March 1982.

Vocal Fold Physiology. Contemporary Research and Clinical Issues. Diane M. Bless and James H. Abbs, Eds. College-Hill Press, San Diego, Calif., 1983. xvi, 466 pp., illus. Paper, \$39.50. From a conference, Madison, Wis., June 1981.

Whole Body Computerized Tomography. Practical Image Analysis. Otto Henning Wegener. Karger, Basel, 1983. Various pages, illus. \$49.25. Translated from the German edition.

Will America Sober Up? Allan Luks. Beacon, Boston, 1983. x, 215 pp. \$14.95.

Women in Science. Portraits from a World in Transition. Vivian Gornick. Simon and Schuster, New York, 1983. 172 pp. \$15.95.

Zoospore Plant Pathogens. A Modern Perspective. S. T. Buczacki, Ed. Academic Press, New York, 1983. x, 352 pp., illus. \$54.50.

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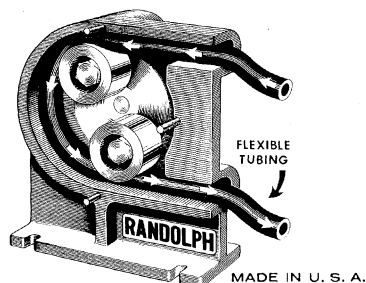
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Academic Administrator, with demonstrated innovative leadership in both academic and business environments. Ph.D. in physiology with teaching and research experience in a number of areas. Box 55, SCIENCE. 3/2; 4/6; 5/4

Biochemist. Ph.D. 1982. Background in protein purification, enzymology, and some cell culture. Familiar with biochemical techniques. Publications. Seeking postdoctoral fellowships. Box 50, SCIENCE. 3/2, 9

Biochemist. Ph.D. 1984. Analytical methods, enzymology, metabolism. Skilled with tissue fractionation, enzyme assays, gel chromatography, TLC analysis, oxygen electrode, UV/visible, ICP emission. Laboratory teaching experience. Desires industrial or postdoctoral research. Available immediately. Box 52, SCIENCE. X

Biology/Marine Biology/Zoology assistant professorship with college/university desired by June 1984. Ph.D. Broad range of research/teaching experience in areas of marine biology, ichthyology, ecology, evolutionary biology, vertebrate and invertebrate zoology, and general biology. Recipient of numerous grants, awards, and scholarships. Publications. Active in making successful presentations throughout the country. For résumé and references, write: C. Stepien, Department of Biological Sciences, University of Southern California, Los Angeles, Calif. 90089. 3/2, 9, 16, 23

Molecular Biologist, Ph.D., Yale 1982. Research experience in recombinant DNA technology, protein-DNA interactions, large scale isolation of proteins and DNA, organic synthesis, and protein chemistry. Seeking position with biotechnology company in product management, marketing, academic industrial liaisons. Articulate and aggressive. Box 53, SCIENCE. 3/2, 9, 16, 23

POSITIONS WANTED

Environmental Chemist. Strong agroanalytical background. Pesticide residue analysis. Adsorption and leachate study of farm wastes. Postdoctoral experience. Ph.D. (agronomy) and M.S. (chemistry). Box 339, SCIENCE. X

Ph.D.: Former NSF and NIH administrator wants to teach vertebrate anatomy. Box 44, SCIENCE. 3/2, 9, 16

Ph.D. Psychology. University of Lancaster, England. Research interests in construct psychology, personality and psychometrics, genetic factors in personality, dreams and sleep research, and the unconscious and its phenomena. Skilled in multivariate statistics (regression, factor analysis, Bayesian approaches), computer programming (Fortran, Algol, Basic, Nova DG Assembler, IBM 370 Assembler), design of physiological monitoring instrumentation and computer interfaces, and psychological test construction. Published in *British Journal of Psychology*, *Psychometrika*, and *Multivariate Behavioural Research*. Book proposal currently in review by Oxford University Press. Seeks university research post or position in research institute. Excellent references. Box 25, SCIENCE. 3/2, 9

Psychologist, Ph.D., Columbia University; 15 years of postdoctoral experience, major—child development. Special interests: infant testing, developmental disabilities, giftedness. Seeking supervisory, teaching, therapist position in health center, university setting. New England. Box 54, SCIENCE. X

POSITIONS OPEN

ANALYTICAL BIOCHEMIST. The Steroid Research Facility at Children's Hospital Medical Center of Northern California is seeking a postdoctoral fellow to participate in research and clinical service involving chromatographic and mass spectrometric analysis of steroids. Analyses will be carried out on urine and plasma samples from patients with a variety of disorders affecting steroid synthesis and metabolism. Research will include developing the new mass spectrometric technique of fast atom bombardment for clinically relevant assays.

Previous experience in HPLC and gas chromatography is requisite and familiarity with mass spectrometry desirable. Knowledge of human steroid biochemistry advantageous. Postdoctoral fellow desired, but persons without Ph.D. but with exceptional experience in the above fields may apply. Salary is \$19,760 to \$21,740 per annum. Send résumé, three references, and other supporting material to: **CHILDREN'S HOSPITAL MEDICAL CENTER, Personnel Department, 51st and Grove Streets, Oakland, Calif. 94609. An Equal Opportunity Employer.**

ANATOMISTS: Three positions, temporary or part-time. Must have experience in teaching gross anatomy and/or histology in a medical center department. Classes to begin 1 July 1984. Send credentials to: **E. G. Hamel, Jr., Ph.D., Chairman, Department of Anatomy, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294. An Affirmative Action/Equal Opportunity Employer.**

AQUACULTURIST. Faculty tenure-track position; rank and salary commensurate with experience. Teach undergraduate and graduate courses in aquaculture; conduct research in freshwater aquaculture. Twelve-month joint appointment in the College of Agriculture and the Texas Agricultural Experiment Station. Send résumé, letter of application, and letters of recommendation by 1 April 1984 to: **Wallace G. Klusmann, Head, Department of Wildlife and Fisheries Sciences, Texas A & M University, College Station, Texas 77843-2258. An Equal Opportunity Employer.**

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSICS. Tenure-track position beginning August 1984. Minimum qualifications include an earned Ph.D. in physics and a demonstrated commitment to teaching in an undergraduate institution. Rank and salary will depend on experience. Responsibilities include teaching introductory college physics, physical sciences, and possibly astronomy, and initiating a program of scholarship. Because Coastal has no physics major, the ability to effectively interact with colleagues in other fields is essential. Send résumé and names of three references by 13 April 1984 to: **Dr. R. H. Moore, Dean, School of Science, University of South Carolina-Coastal Carolina College, P.O. Box 1954, Conway, S.C. 29526. An Affirmative Action/Equal Opportunity Employer.**

**PROFESSOR OF CROP
MOLECULAR GENETICS
UNIVERSITY OF ILLINOIS**

An outstanding scientist is needed for a key position in the newly established **CENTER OF EXCELLENCE IN CROP MOLECULAR GENETICS AND GENETIC ENGINEERING**, funded in part by a grant from the Standard Oil Company (Ohio). We are seeking a molecular biologist experienced in using recombinant DNA techniques, to introduce useful genes into economically important plants such as maize and soybeans. Applicants should provide documentation of proven research experience and capability in genetic engineering and plant molecular biology. Appointment will be in the Department of Agronomy of the University of Illinois, with possible joint appointments in affiliated departments. A person hired at the associate or full professor level will be granted tenure. For the duration of SOHIO funding, the person will be designated the SOHIO Professor of Crop Molecular Genetics. Rank will be commensurate with qualifications and salary will be highly competitive.

The genetic engineering group in the University of Illinois, Agronomy Department, presently comprises five senior scientists in well-established research laboratories. Fifteen other University of Illinois scientists, working in molecular genetics and genetic engineering of higher plants, are identified as collaborators of the SOHIO-UI Center of Excellence.

In addition to establishing a vigorous research program, the successful applicant will be expected to cooperate with and provide expertise in support of existing research programs of the group. Applications will be accepted until 15 April 1984 or until a suitable applicant is found. Submit curriculum vitae, a statement of research goals and teaching interests, a list of publications, and names, addresses, and telephone numbers of five references to: **Dr. T. Hymowitz, Department of Agronomy, University of Illinois, 1102 South Goodwin Avenue, Urbana, Illinois 61801.**

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



**A New MBL
Short Course**

Cell Evolution

**Lynn Margulis
Course Director**

May 28-June 1

An intensive graduate/post-doctoral course on the implications of the molecular biological revolution for the interpretation of the early fossil record of life, including the origins of life and the nature of the evidence from the pre-Phanerozoic fossil record. Microbial consortia and symbioses will be related to the evolutionary origins and history of the major eukaryotic cell organelles. The laboratory work will include study of extant microbial communities and the organisms which comprise them.

Application Deadline: April 16

For additional information and application materials, contact:

Admissions, Marine Biological
Laboratory, Woods Hole, MA 02543
(617) 548-3705

**1984 ACEEE Summer Study on
Energy Efficiency in Buildings
SUMMER STUDY FELLOWS**

The American Council for an Energy Efficient Economy (ACEEE) is planning to appoint three Summer Study Fellows. The fellows will attend the 1984 ACEEE Summer Study on Energy Efficiency in Buildings (14 to 22 August 1984 in Santa Cruz, California) and will participate with the senior fellow in the preparation of a report based on material presented at the Summer Study. The report will describe a research agenda for the field of energy efficiency in buildings. The scope of the agenda will be comprehensive, addressing topics related to both new and existing buildings and encompassing the engineering and basic physical science aspects of building materials, equipment and appliances, and control systems; the economics of building energy use; and the social and institutional factors that affect the design, construction, financing, ownership, management, and operation of buildings.

Fellowships will be awarded to persons who are familiar with research needs related to improved energy efficiency in buildings and who have had advanced training or experience in the field. At least one of the fellows will have special expertise in new and existing commercial building technology. Appointments will be for 6 months beginning on or about 1 July 1984. Fellows may work at the location of their choice but must be able to travel for periodic meetings with the senior fellow, Eric Hirst. The amounts of the fellowship awards will be commensurate with prior experience and salary history.

Interested persons should send their résumés to:

**Carl Blumstein
Summer Study Program Chairman
Universitywide Energy Research Group
Building T-9
University of California
Berkeley, California 94720**

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**SENIOR
BIOCHEMIST**

Ph.D in chemistry, biochemistry or DVM with minimum 3 years industrial experience or equivalent in specialized studies including physiology or veterinary science. It is essential that you have proven skills in animal surgery.

**PRECLINICAL
BIostatistician**

MS in statistics coupled with 3+ years biostatistical experience in a preclinical pharmaceutical environment. Must have experience using computerized statistical packages. Ability to prepare written reports for internal use and FDA.

PHARMACOLOGIST

BS in biology or full equivalent in a related area with 1 year post BS experience conducting standard essays for laboratory animals. Must have ability to assist in developing animal models and evaluating potential utilization of new compounds and allergic diseases.

Our ideal location (with easy access to New York City) offers exceptional living, educational, cultural and recreational facilities. In addition, our compensation package provides extensive medical coverage and relocation assistance.

Please send C.V. detailing salary history and expectations in strictest confidence to: Cassandra E. Croce, Manager, Employee Relations, R&D, BOEHRINGER INGELHEIM, Ltd., 90 East Ridge, P.O. Box 368, Ridgefield, Connecticut 06877. An equal opportunity employer m/f.



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Ingelheim**

POSITIONS OPEN

ANATOMIST/CELLULAR BIOLOGIST

Applications are invited for a senior, tenure-track, fully funded position in veterinary anatomy. The individual should already possess an outstanding record of research in cellular or molecular biology. Preference will be given to individuals with currently funded research grants. The individual will be expected to interact with others on campus having overlapping interests, establish a self-supporting program of research utilizing cellular and molecular approaches to investigate biological structure-function relationships, and participate in the training of graduate students. Salary is competitive. Please submit résumé, three current reprints, three letters of recommendation, and a statement of proposed research direction to: **Dr. G. R. Bratton, Head, Department of Veterinary Anatomy, Texas A & M University, College Station, Texas 77843. An Equal Opportunity/Affirmative Action Employer.**

ZOOLOGICAL INSTITUTE UNIVERSITY OF BASEL, SWITZERLAND

TWO ASSISTANTS in evolutionary ecology required, starting 1 April 1984, or as soon as possible thereafter. Qualifications: doctorate, 2 to 3 years of postdoctoral experience, ability to teach in German. One position will be in ethology and sociobiology, the other in some other area, for example, life-history evolution, sex-allocation theory, community ecology. Main duties: undergraduate course in area of expertise, participation in field course, development of independent research programme. Period of employment: 3 to 5 years. Applications with curriculum vitae, publications list, and names of referees to: **Erziehungsdepartement, Personalabteilung I, Münsterplatz 2, CH-4051 Basel, Switzerland.**

ANATOMY DEPARTMENT—UNIVERSITY OF SOUTH DAKOTA SCHOOL OF MEDICINE

ASSISTANT PROFESSOR. Applicant must be qualified to teach in each of the three basic subdisciplines of human anatomy (gross anatomy, microscopic anatomy, and neuroanatomy) to medical students as well as show ability and desire to maintain an active research program. The salary is competitive and commensurate with training and experience. Closing date: 15 April 1984. Send curriculum vitae and three references to: **Dr. Wesley W. Parke, Chairman, Department of Anatomy, University of South Dakota School of Medicine, Vermillion, South Dakota 57069.**

The Department of Biological Sciences, Mississippi State University, has an opening at the **ASSISTANT PROFESSOR** level for a **Ph.D. in aquatic biology.** The applicant will be expected to contribute to a multidisciplinary program with teaching in the area of vertebrate biology including physiological ecology (undergraduate/graduate level), ichthyology (undergraduate/graduate level), principles of zoology (undergraduate), and a course in specialty. Candidates should have a record of research accomplishments and those with postdoctoral experience are preferred. The position is tenure track with salary negotiable, depending on experience and evaluation. Anticipated date of hiring is August 1984. Interested individuals should send curriculum vitae, description of research interests, and the names and telephone numbers of three individuals willing to provide recommendations to:

**Dr. James D. Yarbrough
Department of Biological Sciences
Mississippi State University
Post Office Drawer GY
Mississippi State, Miss. 39762**

Mississippi State University is an Equal Opportunity/Affirmative Action Employer.

Stanford University School of Medicine Department of Biochemistry

Applications or nominations are invited for a faculty position in the **Department of Biochemistry** at the level of **ASSISTANT PROFESSOR.** Applicants should have demonstrated ability to perform important original research and show promise of excellence in teaching. Candidates should submit curriculum vitae, including a list of publications and a description of research interests to: **I. R. Lehman, Department of Biochemistry, Stanford University School of Medicine, Stanford, Calif. 94305.** They should also provide the names of three individuals who can serve as references.

Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.

POSITIONS OPEN

ASSISTANT PROFESSOR (BIOCHEMISTRY), tenure-track position. Qualifications: Ph.D. in biochemistry or related field. Postdoctoral experience desired. The successful candidate will augment the 17-member Biochemistry/Molecular Biology Area Committee in the Department of Chemistry and will be required to teach at the graduate and undergraduate levels. A vigorous research program is to be established in any appropriate area, but fields involving recombinant DNA methods are preferred. Starting date: August 1984. Application deadline: 26 March 1984. Salary negotiable. Send curriculum vitae, brief statement of research plans, and the names of three references to

**Frederick G. Walz
Department of Chemistry
Kent State University
Kent, Ohio 44242**

An Equal Opportunity/Affirmative Action Employer

ASSISTANT/ASSOCIATE PROFESSOR IN CELLULAR NEUROBIOLOGY

Applications are invited for a tenure-track position available 1 September 1984. Candidates should have demonstrated ability to conduct independent research. Preference will be given to those working in the areas of synaptogenesis, cell cytoskeleton, plasma membrane, or developmental neurobiology. Experience in electron microscopy and immunocytochemistry is desirable. Teaching experience in anatomical science courses also desirable. Rank and salary will be commensurate with qualifications. For fullest consideration, applicants should submit curriculum vitae, a brief statement of research interests and representative reprints, and names and addresses of three references should be included, by 15 May 1984 to: **Dr. G. D. Pappas, Department of Anatomy, University of Illinois College of Medicine, P.O. Box 6998, Chicago, Ill. 60680. The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.**

The **Department of Chemical Engineering** at the University of Colorado is soliciting applications for appointment at the **ASSISTANT PROFESSOR** level although appointment to higher rank will be considered for exceptional candidates. We are seeking a person with the ability to conduct independent research and an interest in teaching and education. We are interested in exceptionally qualified candidates in the research area of biotechnology although interests in any area of chemical engineering will be considered. *The University of Colorado is an Equal Opportunity/Affirmative Action Employer and would particularly appreciate having applications from women and minority group candidates.* This position is available for January 1985. Please send a résumé, transcripts, and names of three references to: **Search Committee, Department of Chemical Engineering, Campus Box 424, University of Colorado, Boulder, Colorado 80309.**

ASSISTANT PROFESSOR IN COMPARATIVE ANIMAL PHYSIOLOGY beginning 22 August 1984. Applicant must have a Ph.D. degree, and at least 1 year of postdoctoral training is preferred. Teaching duties include undergraduate courses in animal physiology, human physiology, general biology, and development of a course in comparative animal behavior. Louisiana State University (LSU) Shreveport is a young, rapidly growing campus of the LSU system. Excellence in teaching and research is expected. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Send curriculum vitae, a description of teaching and research interests, reprints of scientific papers, and three letters of recommendation by 15 April to: **Chairman, Search Committee, Department of Biological Sciences, Louisiana State University in Shreveport, Shreveport, La. 71115. An Equal Opportunity/Affirmative Action Employer.**

BIOMEDICAL ENGINEER to conduct surgical research and teach in a community hospital. Requirements include: an earned Ph.D., expertise in theoretical and clinical aspects of hemodynamics, rheology, oxygen transport in cardiovascular and respiratory system and their applications to noninvasive diagnostic instrumentation (IPG, OPG, and so forth) for vascular disease. Duties include: perform laboratory and clinical studies, teach residents, and write proposals for the Department of Surgery. Send résumé to: **Chief of Surgery, Hospital Box 140, Medical Center of Central Georgia, Macon, Georgia 31208. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

UNIVERSITY OF ARIZONA ASSISTANT/ASSOCIATE PROFESSOR Microbiologist/Immunologist

Applications are being invited for several tenure-track positions in the recently reorganized Department of Microbiology and Immunology at the assistant or associate professor level, to begin summer-fall semester 1984. Duties include teaching undergraduate students, medical students, and graduate students, and conducting an independent research program. Research interests should be within the broad area of microbiology/immunology. Individuals with a strong background in immunology, pathogenesis, bacterial physiology, and virology are particularly being sought. The successful candidate must have a doctoral degree and a record of excellence and productivity in scholarly work. Postdoctoral experience is preferred. Qualified applicants should send a résumé and arrange to have three letters of recommendation sent to: **Professor William Meinke, Search Committee Chairman, Department of Microbiology and Immunology, College of Medicine, University of Arizona, Health Sciences Center, Tucson, Arizona 85724.** Complete applications should be received by 1 April 1984. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology and Toxicology, Medical College of Virginia, Virginia Commonwealth University, invites applications for a tenure-track faculty position in the Division of Biochemical Pharmacology. Applicants should have postdoctoral experience and exhibit potential for developing a strong, independent research program in the area of the mechanism of action of antineoplastic agents at the molecular level. Excellence in teaching is expected. Applicants should send curriculum vitae, list of publications, brief statement of research interests, and the names of three references to: **Louis S. Harris, Ph.D., Chairman, Department of Pharmacology and Toxicology, Box 27, MCV Station, Medical College of Virginia, Richmond, Virginia 23298-0001.**

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF STRUCTURAL BIOLOGY

The Department of Structural Biology, Stanford University School of Medicine, invites applications for a position of assistant professor. Candidates should have a strong background in molecular biology and interests in the structure and function of biological macromolecules, membranes, and organelles.

Applications should include curriculum vitae, bibliography, reprints of published papers, a short summary of research goals, and the names of three scientists familiar with the work of the applicant.

Send applications to:

**Dr. James A. Spudich
Department of Structural Biology
Stanford University School of Medicine
Sherman Fairchild Science Building
Stanford, California 94305**

Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.

BIOCHEMICAL GENETICIST—CELL BIOLOGIST needed for newly formed Research Unit devoted to retinal degenerations. Faculty position available for problem-oriented basic scientist. Previous experience in eye research not necessary. Send curriculum vitae to:

**Dr. Samuel Jacobson
Department of Ophthalmology
University of Miami School of Medicine
P.O. Box 016880
Miami, Fla. 33101**

BIOENGINEERING, University of Utah. Applications from candidates with an earned doctorate are invited for one/two tenure-track faculty positions, assistant to full professor level. The appointee(s) will teach courses in bioengineering and will be expected to conduct an outstanding independent program of research. Joint appointments with other departments possible. Send curriculum vitae and three recent publications to: **Professor Richard A. Normann, Department of Bioengineering, University of Utah, Salt Lake City, Utah 84112.** Application deadline: 15 April 1984. *An Affirmative Action/Equal Opportunity Employer.*

Allelix^{INC}

IMMUNOCHEMISTS

Allelix Inc., Canada's first major biotechnology company, has a vacancy for a postdoctoral fellow in its Molecular Immunology Group. We are seeking candidates with experience in immunoassay techniques and methods of protein purification, characterization and modification, particularly as applied to immunoglobulins of both polyclonal and monoclonal origin. Applicants should have a strong publication record and be able to work as a member of a team on projects of both a basic and applied nature.

Allelix has a broad base in all major biotechnology disciplines and is well financed by three large Canadian organizations. Research is conducted in a modern, well-equipped laboratory near Toronto. Salaries and benefits are at fully competitive levels.

Interested candidates are invited to send résumés, including three references and quoting file number 0064 to:

Dr. D. C. Burke
Scientific Director
Allelix Inc.
6850 Goreway Drive
Mississauga, Ontario
Canada, L4V 1P1

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Unser Forschungszentrum Biochemie befindet sich in reizvoller Lage in Tutzing am Starnberger See, südlich von München.

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Von unserem neuen Mitarbeiter – dem wir auch eine Führungsaufgabe übertragen wollen – erwarten wir, daß er bereits über eine fundierte Erfahrung auf diesem Arbeitsgebiet verfügt.

Die primäre Aufgabenstellung: Optimierung der Produktionsleistungen der Zellen, Entwicklung der Verfahrenstechnik des Zelfermenters und Erarbeitung der Voraussetzung für ein Scale up.

Alle weiteren Details würden wir Ihnen gerne in einem persönlichen Gespräch erläutern. Zur Vorbereitung eines Treffens erbitten wir Ihre Bewerbungsunterlagen.



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Biochemica Werk Tutzing
– Personalabteilung –
Bahnhofstr. 9–15, 8132 Tutzing
West Germany

DIRECTOR



NORTH CAROLINA BIOTECHNOLOGY CENTER

Applications and nominations are invited for the position of director of the North Carolina Biotechnology Center. The Center was established in 1981 in the Research Triangle Park to enhance the state's efforts to promote research, education, and technological development in biotechnology. Working with universities, industry, financial organizations, entrepreneurs, and governments, the Center seeks to stimulate multi-institutional and multi-disciplinary programs. Programs are now underway in the biomedical sciences, plant sciences, materials sciences, engineering, university-industry relations, and small business development. Support is provided by the state with additional funds from federal government and industry grants. The director will be responsible for providing leadership for these activities and for developing new projects and funding sources that will strengthen biotechnology in the state. Candidates must have technical background and demonstrated creative leadership in initiating new programs or organizations and the ability to promote collaborative efforts among universities, industry, and government. Knowledge and experience in biotechnology are desirable. North Carolina is embarking upon a program that will place the state in the forefront of biotechnology research and development. The director will play a key leadership role. Salary competitive.

Applications including a statement of qualifications for the basis of the interest in the position, a curriculum vitae, and names of three references should be sent by March 31, 1984, to **Dr. Quentin W. Lindsey, Executive Director, North Carolina Board of Science and Technology, 116 West Jones Street, Raleigh, North Carolina 27611.**

PHARMACEUTICAL R&D MANAGEMENT

Our clients have given us several exclusive assignments to recruit *industry experienced* individuals for immediate executive openings in the pharmaceutical field — for example:

Preclinical Research Management

Executive Director of Preclinical Research — Ph.D. required plus ten to fifteen years industry experience, including strong managerial background. Northeast.

Drug Regulatory Affairs

Director, Research Compliance — Ph.D. required plus five to ten years industry experience. GLP and GCP experience required. Middle Atlantic.

Senior Director of Drug Regulatory Affairs — Ph.D. or M.D. required plus seven to ten years industry experience. East Coast.

Licensing & Acquisitions

Manager of Worldwide Licensing & Acquisitions — Ph.D. required and seven to ten years industry experience, at least three years of which must be in Lic. and Acq. East Coast.

Pharmaceutical Development

Director-level position — Ph.D. required plus minimum of ten years industry experience, including managerial. Midwest.

Analytical Chemistry

Section Head — Structural identification of new drug compounds. Ph.D. required plus four to six years pharmaceutical industry experience. MS/NMR experience highly desirable. East Coast.

Inquiries are held in confidence. All fees are paid by our corporate clients. Forward complete curriculum vitae together with a letter outlining specifics of industry experience, salary requirements and geographical restrictions to: Robert J. Hodges, Ph.D. Senior Vice President



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543 Valley Rd., Upper Montclair, N.J. 07043 (201) 783-9600

POSITIONS OPEN

POSITION OPENING BIOLOGY DEPARTMENT

St. Lawrence University announces a position opening in the Biology Department for an instructor-level full-time position entitled "coordinator of freshman laboratories." Would assist professor in charge of introductory biology courses. Duties include development, set-up and presentation of demonstration laboratory materials, supervision of student teaching assistants, and student contact in recitation and independent sessions. Master's degree required and preferred as highest degree; background must be suitable to instruction in general biology.

Start date: 27 August 1984.

Filing deadline: 15 April 1984.

Please send résumé, transcripts, and three letters of recommendation to: **Dr. R. F. Wells, Biology Department, St. Lawrence University, Canton, N.Y. 13617.**

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

BIOPHYSICAL PHYSIOLOGIST

The Biophysics Department at The Johns Hopkins University (Faculty of Arts and Sciences) is seeking candidates for an assistant professorship to be filled in the next 6 to 18 months. Our department is small and diverse, with an emphasis at present on molecular structure and dynamics. To help balance the department we are especially interested in candidates with a background in physics whose research interests emphasize problems of function or physiological mechanisms (for example, cell-cell interactions, neural processing, tissue or organ interactions). We have traditionally maintained a strong program in neurophysiology and this appointment will probably be in an area that relates broadly to neurophysiology.

Please submit curriculum vitae, a summary of research interests or plans, reprints of representative publications, and the names of three references to: **Dr. Richard Cone, Department of Biophysics, The Johns Hopkins University, Baltimore, Md. 21218.**

An Equal Opportunity/Affirmative Action Employer

CANCER RESEARCH SCIENTIST

Position open for junior career scientist to be associated with a group studying molecular mechanisms of tumor promotion and carcinogenesis. Candidates should have training at the doctoral level and demonstrated ability for independent research in areas such as recombinant DNA and oncogenes, cell transformation systems, or animal models.

Appointment will include affiliation with the University of Ottawa, Faculty of Health Sciences. After an initial period, the candidate will be expected to obtain continuing support for research from competitive grants.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Applicants should send résumé and the names of three referees to:

**Dr. H. C. Birnboim, Head
Department of Experimental Oncology
Ontario Cancer Treatment and Research Foundation
Ottawa Regional Centre
190 Melrose Avenue
Ottawa, Ontario, Canada K1Y 4K7**

CHAIRPERSON, DEPARTMENT OF CELL AND TUMOR BIOLOGY. As a comprehensive cancer center involved in basic, clinical, and educational programs in cancer, **ROSWELL PARK MEMORIAL INSTITUTE** requests nominations or applications for the above position which involves leadership of a major research program in the molecular and cellular biology of cancer and which is presently staffed by 60 individuals, including 30 scientists. Qualified candidates should minimally possess a Ph.D. or M.D. degree and have a distinguished record in research on molecular and cellular aspects of cancer and have demonstrated capacities for scientific administration. Preference will be given to individuals with a record of collaborative studies with clinical colleagues on the molecular biology of human cancers. *Applications by qualified women and minority candidates are welcomed.* Nominations and applications should be sent to: **Dr. Timothy E. O'Connor, Associate Director for Scientific Affairs, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, N.Y. 14263.**

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

BIOLOGIST

W. Alton Jones Cell Science Center invites applications for a senior biologist in developmental cellular immunology. Candidates must have a Ph.D. degree in the area of cell biology, developmental biology, genetics, and immunology. Work will be on the early phase of T cell development. In vitro culture of TdT positive rat bone marrow T cell progenitor cells and its application to leukemotherapy and therapy for autoimmune disease and other immune disorders. Knowledge on biochemical techniques, fluorescence-activated cell sorter (FACS), transmission electron microscope, microsurgery on chick and amphibian embryos, and various immunological techniques including immunofluorescence will be expected of the successful applicant. Terms and conditions of employment will include: 37½-hour, 5-day work week; some overtime involved. Salary \$25,000 to \$50,000 per year. Benefits: annual vacation, paid holidays, sick leave, medical insurance, life insurance, dental insurance, long-term disability, and pension.

For applicant procedures, contact:

**New York State Job Service
11 St. Bernard Street
Saranac Lake, New York 12983**

Refer to Job Order Number 3577556; D.O.T. Code Number 041 061 030.

BIostatistician—Master's degree in biostatistics or equivalent with experience in biomedical consultation and computer programming. Perform statistical analyses utilizing standard statistical and data-base management computer packages. Consult with medical investigators on the design, conduct, and analysis of research projects. Superb written and verbal communication skills are essential. Join an expanding Department of Biostatistics. Excellent salary and benefits program. Résumé to:

**Diane Sallstian
Employment Recruiter
Cleveland Clinic Foundation
9500 Euclid Avenue
Cleveland, Ohio 44106**

CHAIR, DEPARTMENT OF PSYCHIATRY. The University of North Carolina at Chapel Hill School of Medicine, is searching for a chairperson for the Department of Psychiatry. We seek an individual who is dedicated to excellence and has demonstrated leadership in both research and education. Applications should be accompanied by curriculum vitae and sent to: **Dr. William Droege Mueller, Chairman, Psychiatry Search Committee, Department of Obstetrics and Gynecology, 4019 Old Clinic Building 226H, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514, not later than 15 April 1984. Minorities and women are encouraged to identify themselves voluntarily. The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.**

CHAIRPERSON DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING UNIVERSITY OF UTAH

Applicants with outstanding research accomplishments and a genuine interest in the future of mechanical and industrial engineering are urged to apply. Complete curriculum vitae/résumé, list of publications, at least three technical references, and a letter outlining personal academic, teaching, and research goals as well as suggested departmental academic and research goals should be directed to: **Dr. David Pershing, Chairman, Mechanical and Industrial Engineering Search, 310 Park Building, University of Utah, Salt Lake City, Utah 84112. The University of Utah is an Equal Opportunity Employer.**

DIRECTOR MARINE SCIENCE AND MARITIME STUDIES CENTER

A tenure-track position at assistant/professor level is available 1 July 1984. Qualifications include a Ph.D. in a field of marine biology; ability to administer a marine field laboratory; to teach; and proven ability to obtain research funds. Submit curriculum vitae and three letters of recommendation by 1 May 1984 to:

Dr. M. Patricia Morse, Northeastern University, Marine Science and Maritime Studies Center, Nahant, Mass. 01908. Salary: negotiable. Northeastern is an Equal Opportunity/Affirmative Action/Title IX University.

POSITIONS OPEN

CHAIR, DEPARTMENT OF NEUROLOGY UNIVERSITY OF COLORADO SCHOOL OF MEDICINE

The successful candidate for the position of chairperson of the Department of Neurology should be an established investigator in some aspect of neurological science, an experienced teacher of medical students and house officers, and a mature clinician who has leadership abilities. Since excellence in neurobiology is a major direction of the Medical School, the recruitment of an outstanding person is of great importance. *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.* Applicants please send curriculum vitae and three references by 30 April 1984 to:

**Fred Kern, Jr., M.D.
Chairman, Search Committee, B-158
University of Colorado
School of Medicine
4200 East Ninth Avenue
Denver, Colo. 80262**

CHAIRMAN OF PHYSIOLOGY. Wright State University invites nominations and applications for the position of **Chairman/Program Director of Physiology.** This person will have administrative responsibility for a department that is within both the College of Science and Engineering and the School of Medicine. The applicant should have the Ph.D., M.D., or both and established excellence in administration, teaching, and research. Although individuals from all subdisciplines will be considered, those with a molecular-cellular-biophysical orientation are particularly encouraged to apply. Participation in developing programs of biomedical engineering and magnetic resonance will be encouraged. Teaching responsibilities are in the School of Medicine, the College of Science and Engineering, and the Biomedical Sciences Ph.D. Program.

Applications should be sent by 16 March 1984 to: **Daniel Organisciak, Ph.D., Chairman of the Search Committee for Physiology Chairman, Wright State University, Dayton, Ohio 45435.**

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

CHIEF OF OPHTHALMOLOGY. St. Paul-Ramsey Medical Center, major University of Minnesota-affiliated program. Desire Board-certified ophthalmologist with minimum of 6 months of experience as chairperson of an Ophthalmology Department and 2 years of clinical experience in an academic setting. This is a nontenured position and candidates should be able to lead qualified faculty involved in active research program, education, and service. Must have done advanced training in diseases of the cornea and anterior segment. Must have an interest and involvement in the provision of excellent patient care. Competitive salary and fringe benefits. Last date for receipt of application is 1 May 1984. Address inquiries to: **Bruce D. Snyder, M.D., Chairperson, Ophthalmology Search Committee, St. Paul-Ramsey Medical Center, 640 Jackson Street, St. Paul, Minn. 55101. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

DEVELOPMENTAL BIOLOGIST. Tenure-track position for assistant professor beginning by August 1984. The candidate will be expected to maintain an active and fundable research program, to participate in one or more areas of the department's doctoral program, and be qualified to teach a developmental biology course as well as an advanced course in his/her area of specialization. Applicant should send curriculum vitae and three letters of reference to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809, by 8 April 1984.**

Indiana State University is an Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGIST. Tenure-track position for assistant professor beginning by August 1984. The candidate will be expected to maintain an active and fundable research program, to participate in one or more areas of the department's doctoral program, and be qualified to teach a microbiology course as well as an advanced course in his/her area of specialization. Applicant should send curriculum vitae and three letters of reference to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809, by 8 April 1984.**

Indiana State University is an Equal Opportunity/Affirmative Action Employer.

**PH.D. TRAINING AT THE OAK RIDGE
NATIONAL LABORATORY in**

**Biochemistry
Carcinogenesis
Genetics
Cell Biology
Radiation Biology**

Financial Support available from Training Grants from the National Institutes of Health and The University of Tennessee, for U.S. citizens or permanent residents.

For Information, contact **Dr. W. E. Barnett, Oak Ridge Graduate School of Biomedical Sciences, Biology Division, P.O. Box Y, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37830.**

An Equal Opportunity/Affirmative Action Employer.

TECHNICAL OPPORTUNITIES

New Jersey Area

Pharmacia Fine Chemicals, a rapidly expanding biotechnology division of Pharmacia Inc., has positions available for both a Technical Manager and a Technical Specialist. Qualified candidates must demonstrate excellent communications skills both written and oral.

TECHNICAL MANAGER

We are looking for a dynamic scientist with a strong background in biochemical separation methodologies to head a Technical Service Group. The ideal candidate should have management experience and an advanced degree in Biochemistry, Chemistry or Molecular Biology.

TECHNICAL SPECIALIST

We are looking for a candidate with a strong technical understanding of molecular biology for a position as a Technical Specialist to back-up a world-wide marketing effort. A degree in Biochemistry, Molecular Biology or Microbiology required.

We offer competitive salaries and company paid benefits. Please send resume with salary history in confidence to: **Personnel Department, Pharmacia Inc., 800 Centennial Avenue, Piscataway, New Jersey 08854.**

We are an equal opportunity employer, m/f



Pharmacia

CHIEF, BIOSTATISTICS BRANCH

**Division of
Cancer Cause and Prevention
National Cancer Institute
National Institute of Health
Public Health Service
Department of
Health and Human Services**

The National Cancer Institute (NCI) is accepting applications for the Biostatistics Branch Chief position in the Field Studies and Statistics Program of the Division of Cancer Cause and Prevention. The NCI develops the overall national strategy against cancer, coordinates Federal Government and non-Federal government cancer programs, and supports international programs of cancer research. The Field Studies and Statistics Program provides a focus for epidemiologic and biostatistical research within the NCI, especially in the area of cancer etiology.

The CHIEF, BIOSTATISTICS BRANCH will have full responsibility for the following activities: (1) Planning and conducting independent and cooperative research

studies in cancer, using statistical and biometric approaches to investigate the distribution, cause and natural history of cancer in individuals and populations. (2) Providing statistical consultation to NCI intramural scientists and other groups concerned with cancer research. (3) Developing new statistical methodology for designing and analyzing epidemiologic, experimental, and clinical studies in cancer. (4) Conducting basic research in mathematical statistics related to various aspects of cancer. This includes the exploration of mathematical models designed to clarify fundamental processes of cancer biology and carcinogenesis, and to improve methods of quantitative cancer risk assessment. (5) Planning and conducting research and developmental work to improve methodology in the application of computers and data processing techniques to cancer research and related programs.

The position is established at the Civil Service GS-15 level with a salary range from \$48,553 to \$67,969 (cur-

rently limited to \$63,800 per annum). Physicians may also be eligible for Physicians' Comparability Pay up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the United States Public Health Service.

Additional information may be obtained by contacting Mr. Sherman Hatchett, Personnel Management Branch, NCI, (301) 496-6864.

Applications (Personal Qualifications Statement, SF-171) are to be sent to the above individual at the: National Cancer Institute, Building 31, Room 3A23, 9000 Rockville Pike, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are encouraged. Applications must be postmarked not later than April 13, 1984.

The National Institutes of Health is an Equal Opportunity Employer.

HOFFMANN-LA ROCHE

Sr. Scientist

Protein/Glycoprotein

Hoffmann-La Roche is one of the world's leaders in the pharmaceutical industry.

Responsibilities: Protein isolation and characterization; analysis of carbohydrate components of natural and recombinant glycoproteins.

Qualifications: PhD in Biochemistry, 1-3 years postdoctoral experience in protein and glycoprotein isolation techniques and experience with glycoprotein characterization and structural analysis.

Roche offers an outstanding compensation package including an attractive bonus and an environment that encourages professional growth. **Please send resume to: Mrs. Eleanor M. Malone, Professional Employment & Staffing Specialist,**



HOFFMANN-LA ROCHE INC.
Nutley, NJ 07110

An equal opportunity employer

*Products that matter
from people who care*

DIRECTOR OF RESEARCH

Engenics, Inc. is developing a new generation of process systems for commercial scale biological synthesis and purification of chemicals. As a result of the firm's growth and technical progress, an outstanding new career opportunity has been created and will report directly to the Vice President for Research and Development.

Initial responsibilities include directing a group of 10-15 specialists in molecular genetics, microbiology, biochemistry and analytical chemistry. The Director will have a major role in project selection, planning and management. Responsibilities will also include development and implementation of plans for growth of the Company and professional development of its employees. The individual must interact effectively with the Vice President for Research and Development, The Director of Process Development and personnel responsible for technology assessment.

The position requires a Ph.D. in Microbiology or Biochemistry and at least 5 years experience in leading a multidisciplinary group of technical problem-solvers. Industrial research experience is preferred.

The position offers:

- outstanding opportunities for professional development and recognition
- equity participation
- competitive salary and benefits
- assistance with relocation



Please send your resume and salary history to:

Dr. S. E. Shumate II
Vice President for Research and Development
Engenics, Inc.
3760 Haven Avenue
Menlo Park, CA 94025

POSITIONS OPEN

CELL BIOLOGIST, ASSISTANT PROFESSOR.

One-year term with opportunity for up to three 1-year extensions. To participate in teaching cell biology courses and carry our research program in the area of regulation of the cell cycle or cell differentiation. Must have Ph.D., be eager and qualified to teach and conduct research, and be willing to interact with other cell biologists in the department. Send résumé, statement of research and teaching background and interests, and three letters of recommendation by 1 April 1984 to: **Dr. Brower R. Burchill, Department of Physiology and Cell Biology, University of Kansas, Lawrence, Kans. 66045.**

COMPUTER ENGINEERING HEAD OF PROGRAM

The University of California, Santa Cruz, invites nominations and applications to head a new program in **computer engineering**. First computer engineering undergraduates admitted fall 1984. Graduate studies added as program is staffed. Ten new faculty will be hired over the next few years in computer architecture, VLSI design, graphics, computer-aided design, and related fields of software and hardware. Research/teaching credentials and demonstrated leadership ability sufficient for appointment as full professor, University of California; prior administrative experience desirable. The appointee will establish direction of research/teaching program through subsequent hiring of new faculty. Development of an extramurally funded research program expected. Salary and starting date negotiable. Send applications, including three letters of reference, by 31 March 1984 to: **Chair, Computer Engineering Search Committee, Office of the Dean, Division of Natural Sciences, University of California, Santa Cruz, Calif. 95064. An Affirmative Action/Equal Opportunity Employer.**

DEAN, COLLEGE OF SCIENCE AND ENGINEERING. Wright State University invites applications and nominations for this position available 1 September 1984. The college has 200 faculty, 3700 undergraduate majors, and 400 graduate students and is organized into a School of Engineering and 11 departments: biological sciences, chemistry, computer science, geological science, mathematics and statistics, physics, and psychology. Anatomy, biochemistry, microbiology/immunology, and physiology are matrixed with the School of Medicine. Candidates must be eligible for appointment as a full professor and show evidence of leadership, scholarly achievements, and administrative experience. Send applications with curriculum vitae and names, addresses, and telephone numbers of four references by 31 March 1984 to: **Dr. Jack Halki, Chair, Advisory Search Committee, c/o Provost's Office, Wright State University, Dayton, Ohio 45435 (telephone: 513-223-9942). An Equal Opportunity/Affirmative Action Employer.**

PANLAB GENETICS, INC.

Director and Staff Scientists for Fungal Molecular Biology Research

Panlab Genetics, Inc., an internationally known service research organization having nearly 200 clients in 15 countries, is seeking to assemble a team in its Seattle laboratory to develop recombinant DNA and vector technology in filamentous fungi. Applications are invited from postdoctoral molecular biologists for the above positions. Experience with filamentous fungi is desirable but not essential. An attractive salary plus relocation expenses are offered. Please send curriculum vitae, including names of three referees, to:

Dr. Christopher Ball
Panlab Genetics, Inc.
110-110th Avenue, NE, Suite 704
Bellevue, Wash. 98004

An Equal Opportunity Employer

THE HELLENIC ANTICANCER INSTITUTE invites applications for the post of **DIRECTOR** of its Research Center comprising Biochemistry, Biology, Cell Physiology, and Immunology departments.

Candidates must have proven experience in cancer research and ability to develop their own research projects.

Applications should be accompanied by detailed curriculum vitae, a summary of proposed research projects, and the names of three referees and should reach: **The Hellenic Anticancer Institute, 171 Alexandras Avenue, Athens, Greece, not later than 16 March 1984. The appointment, originally for 3 years, will be renewable and will carry a Greek university professorial salary.**

DNAX Research Institute

Molecular Biology and Immunology

DNAX Research Institute, located adjacent to Stanford University in Palo Alto, California, has established a strong program focused on basic research in the areas of molecular biology and immunology. The Institute is supported by a Board of Scientific Advisors that includes eminent scientists at major US universities. An active academic atmosphere is maintained by encouraging strong interactions among laboratories within DNAX, with visiting scientists and advisors, and with collaborators at Stanford and other universities.

Staff Scientists

A molecular biologist to lead a newly created small collaborative research team to develop gene expression in *E. coli* and yeast. The successful candidate will have a PhD in molecular biology or biochemistry, and proven expertise in the field with two or more years of relevant post-doctoral experience. In addition, the applicant should have demonstrated skill in recombinant DNA technology and should be enthusiastic about carrying out a systematic approach to achieving gene expression in *E. coli* and yeast.

The other position will participate in collaborative projects with other molecular biologists and immunologists aimed at cloning genes for T-cell regulatory factors. Must be a highly motivated PhD with strong interest in the immune system, especially in regulatory factors produced by T-lymphocytes. Candidate should have a strong background in nucleic acids, as well as knowledge of cDNA or genomic DNA cloning techniques.

Post-doctoral Fellowships

DNAX has a limited number of fellowships available for persons trained in immunology or molecular biology, particularly those interested in the purification and characterization of steroid receptor proteins; in T-cell mediated activation of B-cells; and in the structure, expression, and mechanism of action of cloned IgE isotype-specific regulatory molecules.

Applicants should identify position in which they are interested and send current curriculum vitae or resume, list of publications, and the names of three references to Barbara Harley, DNAX Research Institute, 1450 Page Mill Road, Palo Alto, CA 94304. An equal opportunity employer m/f/h.

Research Opportunities in Molecular Genetics

Pioneer Hi-Bred International, Inc., a world leader in plant breeding research, is seeking three molecular biologists for its biotechnology research group. These are permanent staff positions which require skills in vector construction, in development and use of selectable markers in eucaryotic cells or with transposable elements. Expertise in microinjection techniques or other DNA transfer technology is highly desirable.

The ideal candidate will be an imaginative and productive scientist who is seeking an open, stable and supportive research environment. He or she will have a Ph.D. and post-doctoral experience in molecular biology, genetics or nucleic acid biochemistry.

Pioneer has emphasized an expanding research commitment for over 50 years, maintains state-of-the-art facilities and equipment and provides full operating and technical support. Salaries are highly competitive and commensurate with education and experience. Benefits are comprehensive and substantial. Research facilities are located outside Des Moines, Iowa, a city which offers many cultural advantages of larger metropolitan areas plus the easy living and recreational opportunities usually found in less populated areas.

Individuals interested in a challenging research position with responsibilities for establishing a research program within the corn transformation research project should forward resumes including research interests and 3 references to:



PIONEER®

Dr. Nicholas M. Frey
Director of Biotechnology Research
Pioneer Hi-Bred International, Inc.
P.O. Box 38
Johnston, Iowa 50131

* Registered trademark of Pioneer Hi-Bred International, Inc., Des Moines, Iowa 50309

POSITIONS OPEN

The Department of Biological Sciences at Stanford University seeks a **DEVELOPMENTAL GENETICIST—MOLECULAR BIOLOGIST** for a faculty appointment at the assistant professor level. The appointee will be expected to develop an active and distinctive research program and to participate in both graduate and undergraduate teaching programs. Interested persons should send curriculum vitae and the names of three references to: **Professor Robert T. Schimke, Department of Biological Sciences, Stanford University, Stanford, California 94305**, by 1 April 1984.

Stanford University is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, Southeastern Louisiana University (SLU) Biological Field Station, 12-month, tenure-track position. Rank and salary dependent on qualifications; Ph.D. degree in aquatic biology or ecology required. Experience in research, administration, and grantsmanship required. Starting date: 1 July 1984. Send curriculum vitae, three letters of reference, and publication and grants list by 31 March 1984 to: **Dr. Gary Childers, Head, Biology Department, P.O. Box 814, SLU, Hammond, La. 70402**. *Equal Opportunity Employer.*

EUKARYOTIC CELL BIOLOGIST with research interests at the molecular level. **ASSISTANT PROFESSOR** in Division of Cellular/Molecular Biology, eligible for tenure review. Earned Ph.D. and teaching experience required, postdoctoral experience preferred. Seeking applicants who are committed to undergraduate and graduate teaching and research. Teaching duties include introduction to cellular biology. Advanced course and research program development expected. Salary commensurate with experience. Send curriculum vitae, reprints, statement of proposed research program and teaching experience, official transcripts, and three letters of reference, to arrive no later than 15 April 1984, to:

**Dr. L. Raymond Fox, Chairman
Department of Biological Sciences
Wichita State University (WSU)
Wichita, Kans. 67208**

All correspondence should identify the position applied for. *WSU is an Equal Opportunity/Affirmative Action Employer.*

EXTENSION ASSOCIATE, Laboratory of Ornithology, Cornell University. M.S. or equivalent experience in ornithology or related discipline. Experience in written and verbal communications with a wide audience, including amateur and professional ornithologists. Knowledge of ornithological literature and ability to identify North American birds by sight and sound essential; \$12,000 to \$14,000 annual salary. Send résumé and three references to: **Dr. Charles R. Smith, Laboratory of Ornithology, Sapsucker Woods, Ithaca, N.Y. 14850**.

FACULTY POSITIONS. Assistant and/or associate professor required to teach medical microbiology and associated topics to medical and graduate students. Individual expected to develop graduate courses in a specialized field of interest. Also required to maintain a vigorous research program in cellular immunology, molecular biology, or eukaryotic or prokaryotic genetics and to obtain peer-reviewed funding. Salary dependent on experience and qualifications. Send curriculum vitae, bibliography, and the names of three references by 31 March 1984 to: **Dr. Fred Rapp, Chairman, Department of Microbiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, Pa. 17033**. *The University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF WASHINGTON

The Department of Pharmacology, School of Medicine, invites applications for a tenure-track assistant professor position. A Ph.D. or M.D. degree and postdoctoral research experience are required. Selection will be based on scientific excellence and the potential to establish an outstanding independent research program. The successful candidate will participate actively in the department's teaching program. Applicants should arrange to have curriculum vitae, three letters of recommendation, and a statement of research plans sent by 1 April to:

**Dr. William A. Catterall, Chairman
Department of Pharmacology SJ-30
Attention: Faculty Search
University of Washington
Seattle, Washington 98195**

Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

ELECTRON MICROSCOPIST (Ph.D.) at the level of postdoctoral fellow or research associate, to provide EM services and collaborate on projects in membrane biochemistry related to atherosclerosis. Jeol S100 EM, Sorvall MT 5000 ultramicrotome, Balzers BAF 300 freeze fracture apparatus, technical help available. Please send résumé, salary request, and the names of three references to: **Dr. H. H. O. Schmid, The Hormel Institute, University of Minnesota, Austin, Minn. 55912**. Telephone: 507-433-8804. *The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages women and minority applicants.*

FACULTY POSITION IN ECOLOGY OF ORNAMENTAL PLANTS

The University of California, Davis, Department of Environmental Horticulture, invites applications for a tenure-track, 11-month faculty position at the assistant/associate professor level; 20 percent teaching, 47 percent research, 33 percent extension. A Ph.D. in a discipline related to crop ecology, plant physiology, horticulture or agronomy, or other closely related areas is required. It is expected that the successful applicant will be responsible for teaching and advising undergraduate and graduate students and conduct a research program in crop ecology in relation to production in the greenhouse and nursery and/or the ecology of ornamental plants in the landscape. Application of systems analysis and modeling will be encouraged. Send curriculum vitae, including list of publications, statement of research and teaching interests, academic transcripts, and names and addresses of at least three referees to: **Dr. Anton Kofranek, Chairperson of Search Committee, Department of Environmental Horticulture, University of California, Davis, Calif. 95616**, by 1 May 1984. The position is available 1 July 1984 or as mutually agreeable. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

Full-time, sabbatical leave replacement (1 year) **FACULTY POSITION IN BIOLOGY** is available beginning fall 1984 semester. Ph.D. ecologist/zoologist preferred. Rank and salary negotiable; 3 years of college teaching required. Send résumé, three letters of reference, and official transcripts to: **Dr. Joseph Piscitelli, Chairperson, Biology Department, Kutztown University of Pennsylvania, Kutztown, Pa. 19530**. *Kutztown University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.* Last date for accepting applications is 1 April 1984.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO SCHOOL OF MEDICINE DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY HEAD, DIVISION OF IMMUNOLOGY

The School of Medicine of the University of California, San Francisco, is seeking a head for the Division of Immunology within the Department of Microbiology and Immunology. The head will occupy a tenured faculty position with joint appointments in the Department of Microbiology and Immunology, and the Cancer Research Institute. Qualified individuals will have training and experience in molecular biology and immunogenetics, and a demonstrated capacity for independent, creative activity of distinction. In addition to responsibilities in research and teaching immunology to medical students, other health sciences students and graduate students, the head will lead a graduate degree program in immunology utilizing the resources for immunology and related disciplines on the University of California, San Francisco campus. Applications with curriculum vitae should be sent to: **Dr. John D. Stobo, HSW-473, University of California, San Francisco, California 94143**. *An Affirmative Action/Equal Opportunity Employer.*

HEAD, DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY. The Department of Biochemistry and Molecular Biology, Louisiana State University (LSU) Medical Center-Shreveport, is seeking highly qualified candidates for the position of department head. It is hoped that this position can be filled in the academic year 1984-1985. Candidates should have demonstrated leadership in research and teaching. Applicants should submit curriculum vitae and the names of three references by 15 May 1984. Forward to: **Dr. John T. Wilson, Chairperson, Biochemistry Search Committee, LSU School of Medicine in Shreveport, P.O. Box 33932, Shreveport, La. 71130**. *Louisiana State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR BIOLOGY

As part of a continuing program of growth and development, the Boston College Biology Department will make several tenure-track appointments during the next few years. Applications are invited for the first position, which will be filled as early as September 1984 at the assistant or associate professor level. Candidates should have a vigorous research program in molecular biology, preferably utilizing recombinant nucleic acid techniques, and have a commitment to teaching at the graduate and undergraduate levels.

We offer a competitive salary and start-up funds. The department has an active M.S. and Ph.D. program in research areas that emphasize the cellular, molecular, and biochemical approaches to biological problems.

Applications, including the names of three references, should be submitted by 1 April 1984 to: **Chairman, Biology Search Committee, Biology Department, Higgins Hall, Boston College, Chestnut Hill, Mass. 02167**.

IMMUNOCHEMIST/CLINICAL CHEMIST. Ph.D. or M.S. chemist to develop and apply immunoassays for enzymes and apolipoproteins in an excellent academic and research environment at the University of Washington. Send curriculum vitae to: **John Albers, Northwest Lipid Research Clinic, Harborview Medical Center, 325 Ninth Avenue, Seattle, Washington 98104**.

Wanted: A scientist with expertise in **IMMUNOLOGY OR VIROLOGY** for a tenure-track position with guaranteed funding for 5 years and a joint appointment in the Departments of Ophthalmology and Microbiology at the College of Physicians & Surgeons of Columbia University. Candidate will be expected to develop an independent vision oriented research program. Interested candidates should send their curriculum vitae and names of three references to either: **Peter Gouras, M.D., Director of Research, Department of Ophthalmology, or Harold Ginsberg, M.D., Chairman, Department of Microbiology, College of Physicians & Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032**.

INSTRUCTOR, BIOCHEMISTRY—RICE UNIVERSITY. The Department of Biochemistry seeks applications for a 1-year appointment of a special postdoctoral teaching-research associate position. The candidate will participate in a high level undergraduate biochemistry laboratory program in both the fall and spring semesters. The candidate is also expected to carry out independent research in association with one of the full-time faculty members. The salary will depend on the quality of the candidate. Interested parties should send a complete résumé, reprints, and the names of three references as soon as possible to: **J. S. Olson, Chairman, Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251**. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

INTEGRATED PEST MANAGEMENT SPECIALIST—Ph.D. or master's with 5 years of experience. Must have ability to analyze pest management problems relating to Texas agricultural products. Work with producer groups and research institutions. Develop analysis of research needs. Supervise implementation of pest management programs. Requires capacity for independent judgment and creativity. Major role in developing program for progressive state agency. *Equal Opportunity Employer*. Salary: \$29,952 plus benefits; 2 April deadline. **Reference Number 84-08**. Contact: **Ken Kadlec, Texas Department of Agriculture, P.O. Box 12847, Austin, Texas 78711**; telephone: 512-475-4457.

MASS SPECTROSCOPIST—RICE UNIVERSITY. The Department of Biochemistry announces the availability of a scientific staff position for an experienced bioorganic mass spectroscopist to operate the GC-MS unit, to participate in research on sterol biosynthesis and the chemistry of complex lipids, and to assist in teaching an advanced experimental biochemistry laboratory course. Salary is dependent on qualifications and experience. Position available immediately. Interested persons should send résumé and names of three references to: **G. J. Schroepfer, Jr., Department of Biochemistry, Rice University, Houston, Texas 77005**. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

BIOMEDICAL RESEARCH OPPORTUNITIES NATIONAL INSTITUTES OF HEALTH

The Intramural Research Division of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIADDK), has openings for highly qualified applicants in many exciting areas of biomedical research. NIADDK, one of 11 Institutes comprising the National Institutes of Health (NIH), located 20 minutes from Washington, D.C., in suburban Maryland, offers a unique research opportunity for scientists from both the U.S. and abroad. The NIH commitment to full-time research and its academic atmosphere together with state-of-the-art instrumentation and extensive interaction among the 2500 doctoral-level scientists at the NIH constitute a biomedical research environment that is unequalled elsewhere.

The majority of the 350 positions at NIADDK are filled by postdoctoral and sabbatical-leave scientists for periods of up to several years. For further information about specific research in areas listed below, send inquiries to: Recruitment Program, Dr. Jesse Roth, Director of Intramural Research, NIADDK, National Institutes of Health, Bldg. 10, Rm. 9N-222, Bethesda, MD 20205.

Gene expression	Development and differentiation
Nucleic acid and chromatin structure	Protein structure and function
Molecular genetics and recombinant DNA	Biophysics
DNA and RNA replication	Mathematical biology
Membrane biology/cell organelles	Chemistry (all branches)
Transport phenomena	Pharmacology
Hormones	Immunology
Enzymology	Molecular mechanisms of disease
Receptors	Intercellular communication
	Neurobiology

NIH is an Equal Opportunity Employer

Research Assistant

The Plant Genetics Department of Pfizer Central Research has an immediate opening for a Research Assistant to be part of a multidisciplinary research team.

You will be involved with experiments in plant molecular biology, including the design and construction of vectors for the transformation of plant cells, as well as investigation of gene organization, regulation and function in higher plants.

Qualified applicants should have an MS or equivalent experience in molecular biology with laboratory experience in recombinant DNA and nucleic acid biochemistry. Plant molecular biology experience is desirable but not required.

This position offers a stimulating professional environment in an attractive Connecticut shore area, complemented by a competitive salary/benefits package and relocation assistance. Forward your resume, description of research and references to: Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal
opportunity employer



THE AUSTRALIAN NATIONAL UNIVERSITY JOHN CURTIN SCHOOL OF MEDICAL RESEARCH

POSTDOCTORAL FELLOW/RESEARCH FELLOW/ SENIOR RESEARCH FELLOW

(several positions)

Applicants for these research positions should have a PhD degree (or equivalent qualification) and expertise in any of the areas of research listed below. A number of appointments will be available from late 1984 or early 1985.

Department of Biochemistry: (Head: Professor F. Gibson)

Energy-transducing ATPase; membrane assembly; bacterial transport; bioenergetics; mechanism of action of classical and multifunctional enzymes; molecular biology; gene expression; differentiation; oncogenesis.

Department of Experimental Pathology: (Head: Professor P.C. Doherty)

Biology and biochemistry of tumour metastasis, malignancy and host response; viral and auto-immune pathological process in the central nervous system; vascular and lymphatic pathology; inflammation; pathogenesis of malaria.

Department of Human Biology: (Head: Dr. R.L. Kirk)

Molecular biology of inherited disease, cytogenetics and somatic cell genetics; human population genetics, including DNA polymorphisms.

Department of Immunology: (Head: Professor B. Morris)

Ontogeny of the immune response; immunology of the foetus and pregnancy; experimental surgery of the embryo and foetus; embryo transplantation; genetics of disease resistance; reproductive and developmental biology; tissue transplantation; physiology of the lymphatic system.

Department of Medicine and Clinical Science: (Head: Professor W.F. Doe)

Mucosal immunity and inflammation; neutral proteases; interleukins and differentiation of bone marrow cells, macrophages and natural killer cells; pathogenesis of inflammatory bowel disease and colon cancer; neurophysiology of intestinal motility; calcium and cell regulation; malignant hyperpyrexia; asthma; platelets, atheroma and haemostasis; transplantation biology.

Department of Microbiology: (Head: Professor G.L. Ada)

Histocompatibility antigens; viruses; carcinogenesis; immunity to and epidemiology of viral infections.

Department of Pharmacology: (Head: Professor D.R. Curtis)

Mammalian central transmitters; pain and analgesia; mammalian peripheral sympathetic synapses; biophysics of smooth muscle; nerve growth factors.

Department of Physical Biochemistry: (Head: Professor L.W. Nichol)

Biological macromolecules; interacting protein systems; multienzyme complexes; enzymes of sulphur metabolism; protein conformation and hydration; secretory and blood proteins.

Department of Physiology: (Head: Professor (Elect) P.W. Gage from April 1984; Acting Head to 31 March 1984: Dr. R.I. Close)

Synaptic transmission at peripheral and central synapses; calcium ionic and gating currents; charge movements in nerve and muscle; contractile activation in muscle; visual information processing.

Experimental Neurology Unit: (Director: Professor R. Porter)

Neurophysiology; spinal cord; synaptic transmission at central synapses; respiratory neurophysiology; somatosensory pathways; control of movement; physiology of the cerebral cortex in primates.

CONDITIONS OF EMPLOYMENT

Salary will be in accordance with qualifications and experience within the ranges: Senior Research Fellow: \$32679-38980 p.a.; Research Fellow: \$23394-30734 p.a.; Postdoctoral Fellow Grade 1 (at fixed point on scale) \$20164-23100 p.a.

Appointment as Senior Research Fellow/Research Fellow will be for up to three years initially with the possibility of extension after review to maximum of five years; as Postdoctoral Fellow for one or two years initially with possibility of extension to maximum of three years.

Grants are provided towards travel and removal. Assistance towards housing is given to an appointee from outside Canberra. Eligible appointees will be required to join the Superannuation Scheme for Australian Universities. The University reserves the right not to make an appointment or to make an appointment by invitation at any time.

Further information and application details are available on request from Heads of Departments, or by writing to the Registrar.

Prospective applicants are encouraged to write for further information before lodging applications with the undersigned. The closing date for receipt of applications is 16 March 1984.

G.E. Dicker, Registrar, The Australian National University, GPO Box 4, CANBERRA, ACT 2601, Australia.

POSITIONS OPEN

INSECT NEUROBIOLOGIST. Full-time, tenure-track appointment at the rank of assistant professor. We will seek candidates having research interests in areas such as integrative functions of the insect CNS, neuroendocrine mechanisms, neurogenetics, neurodevelopment, neuron physiology, and pharmacology. Appointee will teach annual undergraduate course in general insect physiology and conduct graduate seminars. Applicants should have a Ph.D. and should demonstrate outstanding potential for research and teaching. Applications should include the following: (i) curriculum vitae, academic transcripts, and evidence of teaching skills and experience; (ii) bibliography and selected reprints or manuscripts; (iii) statement of research objectives and approaches proposed; and (iv) names and addresses of at least three people who can provide recommendations. Submit all materials by 1 April 1984 to: E. S. Sylvester, Chair, Department of Entomological Sciences, 201 Wellman Hall, University of California, Berkeley, Calif. 94720. *University of California is an Equal Opportunity/Affirmative Action Employer.*

INSTRUCTOR—CANCER PHARMACOLOGY. The Department of Pharmacology, University of Tennessee Center for the Health Sciences (UTCHS), has an immediate opening (nontenure-track) for a Ph.D. pharmacologist to study the pharmacological determinants of novel anthracycline antitumor drug action. Clinical pharmacology training and at least 2 years of postdoctoral experience in anthracycline research are essential. Other requirements: experience in animal research and small animal surgery, high-performance liquid chromatography and microsampling techniques, and a publication record in metabolism and disposition of antitumor antibiotics. Salary: \$19,000 to \$21,000, depending on qualifications. Inquiries, curriculum vitae, and names of three references should be received prior to 16 March 1984, addressed to: Dr. Murray Heimberg, Department of Pharmacology, UTCHS, 874 Union Avenue, Crowe Building, Room 100, Memphis, Tenn. 38163. *UTCHS is an Equal Opportunity/Affirmative Action Employer.*

INTRODUCTORY BIOLOGY LABORATORY COORDINATOR. Nontenure track, renewable, 12-month appointment beginning 18 June 1984. Responsible for the operation of three introductory biology course laboratories, including some teaching. M.S. and laboratory teaching experience required. Applicants with academic or research background in botany, zoology, or ecology and with post-secondary level teaching experience preferred. Salary: \$14,000. Send complete curriculum vitae, statement of experience applicable to position, official copies of all college/university academic transcripts, and three letters of reference to:

Dr. L. Raymond Fox, Chairman
Department of Biological Sciences
Wichita State University
Wichita, Kans. 67208

All correspondence should identify the position applied for. Application deadline is 30 March 1984. *Wichita State University is an Equal Opportunity/Affirmative Action Employer.*

LIPID RESEARCH

POSTDOCTORAL POSITIONS available to study skin lipids. Ph.D. required, preferably in chemistry or biochemistry. Opportunity to collaborate closely with experienced investigators studying the occurrence, chemistry, physical properties, metabolism, and functions of lipids in skin. Appointments for 1 to 3 years available immediately. Salary: \$16,000 to \$18,000. Send résumé and names of references to: Donald T. Downing, Ph.D., Department of Dermatology, University of Iowa College of Medicine, Iowa City, Iowa 52242. *Affirmative Action/Equal Opportunity Employer.*

PHARMACEUTICS FACULTY POSITION

Assistant or associate professorship in pharmaceuticals, tenure track, University of Michigan. Ph.D. in physical pharmacy, pharmaceuticals, or related discipline. Minimum of 3 years of postdoctoral experience in a university or industrial research laboratory. Capable of directing graduate students, pursuing independent research, and participating in the teaching of pharmacy students. Applicants should provide curriculum vitae, description of current research interests, reprints of three recent publications, and three letters of recommendation by 21 March 1984 to: Dr. Gordon L. Flynn, College of Pharmacy, The University of Michigan, Ann Arbor, Michigan 48109-1065. *A nondiscriminatory, Affirmative Action Employer.*

POSITIONS OPEN

MECHANICS AND PHARMACOLOGY OF VASCULAR SMOOTH MUSCLE. A research associate position is available to carry out studies on the physiology and pharmacology of microvessels in vitro. Emphasis of the program is on the physical and chemical interactions between wall elements. Send transcript, curriculum vitae, and three letters of recommendation to: Dr. B. R. Duling, Department of Physiology, University of Virginia School of Medicine, Box 449, Charlottesville, Va. 22908. *The University of Virginia is an Affirmative Action/Equal Opportunity Employer.*

MEDICAL GENETICS. Assistant professor of medicine (M.D. or M.D./Ph.D.) with internal medicine training for Division of Medical Genetics in Department of Medicine. Independent laboratory research record with ability to attract own grant support essential. Apply to: Division of Medical Genetics, RG-25, University of Washington, Seattle, Wash. 98195. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

Tenure-track position in **MICROBIOLOGY**, South Bend Center for Medical Education, Indiana University School of Medicine. Applicants should have a Ph.D. and be capable of teaching a course in microbiology to first-year medical students. Candidates will be required to show evidence of strong research commitment; postdoctoral experience desirable. The 12-month appointment would begin in summer 1984. Send curriculum vitae and letter describing current research activities, future goals, and teaching interests to: John F. O'Malley, Ph.D., Associate Director, South Bend Center for Medical Education, Haggard Hall, University of Notre Dame, Notre Dame, Ind. 46556. *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST. Tenure-track position, assistant professor, starting September 1984. Ph.D. degree with teaching and research experience in prokaryotic molecular genetics, recombinant DNA, and hybridoma technology. Prefer applicants with related postdoctoral experience. Successful candidate will develop courses in area of expertise to complement undergraduate and graduate offerings, assist in introductory courses, and have demonstrated research ability. Requires strong commitment to quality teaching and research. Salary competitive. Applications close 30 March 1984. Submit résumé, three letters of reference, and official transcripts to: Dr. G. S. Trelawny, Head, Department of Biology, James Madison University, Harrisonburg, Virginia 22807.

James Madison University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR GENETICIST

The Divisions of Clinical Immunopathology and Experimental Pathology of the Department of Pathology, University of Pittsburgh School of Medicine, seek a molecular geneticist to establish an independent research program. Potential areas of clinically oriented collaboration include human tissue transplantation, lymphoproliferative disease, autoimmunity (emphasizing insulin-dependent diabetes), aging, and immune deficiency diseases. Collaboration is also sought in defining structural and functional properties of the rat major histocompatibility complex.

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Please send curriculum vitae and three letters of recommendation to:

Bruce S. Rabin, M.D., Ph.D.
Chairman of the Search Committee
Division of Clinical Immunopathology
Department of Pathology
School of Medicine
University of Pittsburgh
Pittsburgh, Pa. 15261

PEPTIDE CHEMIST

University of Cincinnati Medical Center

Selected sequences and analogs of gastrointestinal and neuronal polypeptides will be synthesized using solid phase methodology. The products will be used for structure-function studies and for raising antibodies in collaboration with a research team of biochemists and physiologists. Sequences of apolipoproteins and hemolytic toxins are also being synthesized. The position is for 3 years beginning as soon as possible after 1 April 1984.

Applicants should send curriculum vitae and names of referees to: Dr. R. F. Murphy, Department of Surgery, University of Cincinnati Medical Center, 231 Bethesda Avenue, Cincinnati, Ohio 45267.

POSITIONS OPEN

PHARMACOKINETICIST—Tenure-track faculty position to establish and direct a Clinical Pharmacokinetics Laboratory which will support consultation services within the Texas Medical Center. Responsibilities include didactic and clerkship instruction to candidates for the B.S. in pharmacy and Pharm.D. degrees. Collaborative support of basic and clinical pharmacokinetic research is expected. Applicants must possess the Ph.D., Pharm.D., or M.S. degree with a strong background and experience in pharmacokinetics and drug analysis. Salary and rank are commensurate with training, education, experience, and ability to generate extramural funding. Applicants should provide curriculum vitae and three letters of recommendation to: Clayborne M. Monk, Ph.D., Chairman, Clinical Pharmacokinetic Search Committee, School of Pharmacy, Texas Southern University, 3100 Cleburne, Houston, Texas 77004. Telephone: 713-527-7161.

PHARMACOLOGIST—Unusual and challenging opportunity for a highly motivated individual with broad interests and experience in detection, development, and evaluation of medicinally active compounds and natural product samples offered by an internationally known service research organization having nearly 200 clients in more than 15 countries and a pharmacology staff of nearly 100 scientists and technicians. Position offers excellent salary, benefits package, stock options, management future, and requires some travel. Please contact: Dr. M. H. Pindell, President, Panlabs, Inc., P.O. Box P, Sunapee, N.H. 03782.

PHYSIOLOGIST—ENDOCRINOLOGIST University of Cincinnati Medical Center

To work on structure-function relationships in gastrointestinal and neuronal peptides using synthetic partial sequences and analogs and measuring pancreatic and gastric secretion, in collaboration with a research team which includes synthetic chemists and biochemists. The work will also be supported by immunometric analyses. The position is for 3 years beginning as soon as possible after 1 April 1984.

Applicants should send curriculum vitae and names of referees to: Dr. R. F. Murphy, Department of Surgery, University of Cincinnati Medical Center, 231 Bethesda Avenue, Cincinnati, Ohio 45267.

PLANT EVOLUTIONARY BIOLOGIST—FACULTY POSITION. The Department of Plant Biology, University of Illinois at Urbana-Champaign, invites applications for a tenure-track position at the assistant professor level for appointment in August 1984. Applicants must have a Ph.D. and have research experience in evolutionary studies of higher plants and in plant systematics utilizing approaches of molecular biology. The appointee will be expected to conduct research in evolutionary relationships of plants and contribute to both graduate and undergraduate teaching programs. It is anticipated that this person will complement and interact with present faculty in evolutionary and systematic biology. Salary is open, depending on the applicant's qualifications.

Applications must include curriculum vitae, a summary of research and teaching interests, and at least three letters of reference which are to be sent to: Dr. David S. Seigler, Search Committee Chairman, Department of Plant Biology, University of Illinois, 505 South Goodwin Street, Urbana, Illinois 61801; telephone: 217-333-7577 or 333-3261. In order to ensure full consideration, applications must be received by 19 March 1984. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

PLANT PHYSIOLOGIST OR PLANT BIOCHEMIST

The Department of Botany, Iowa State University, announces a 9-month (minimum salary: \$19,500) tenure-track position, rank open, available 1 July 1984 for individuals with a Ph.D. or equivalent. Candidates should have research accomplishments and will be expected to develop a strong research program involving graduate training. Teaching responsibilities include a one semester undergraduate plant physiology course, and a graduate course in the individual's speciality, and/or participation in general botany or general biology. Application deadline is 30 March 1984 or until the position is filled. Send curriculum vitae, graduate transcripts, a statement of interests and experience, and three letters of recommendation to: Ronald C. Coolbaugh, Chairman, Department of Botany, Iowa State University, Ames, Iowa 50011. *Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

Research

Scientists

Newly created positions on staff of dynamic R&D operation

So important has R&D become at the Bristol-Myers Company, that this operation has been elevated to Divisional level status. As a result, two excellent opportunities are currently available within the Pharmacology Department for innovative and creative scientists to become involved in new drug discovery programs in the Gastrointestinal and Antiarthritic/Anti-inflammatory Research areas.

● PhD Pharmacology/Physiology

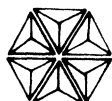
Should have 2 or more years of postdoctoral experience in gastrointestinal pharmacology and/or gastrointestinal function, plus strong record of publication. Research experience or knowledge of the control mechanisms of gastrointestinal motility is also desirable.

● PhD Antiarthritic/ Anti-inflammatory Research

Should have 3 or more years of postdoctoral experience in the design and performance of experiments in hypersensitivity and autoimmune diseases. Published work must reflect ability to perform creative and independent research. Background in immunopharmacology is highly desirable, as is an understanding of the biochemical and molecular aspects of osteo and rheumatoid arthritis.

We offer good starting salaries, comprehensive benefits and a working environment conducive to your professional growth. Our facility is located in Syracuse, a central New York area with excellent cultural, recreational and educational resources. For prompt, confidential consideration, forward your resume with salary history and requirement, to:

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NATIONAL UNIVERSITY OF SINGAPORE

DEPARTMENT OF BOTANY

Applications are invited for appointment to a Lectureship in the Department of Botany.

Candidates should have a Ph.D. degree in plant and/or microbial genetics with good background or working experience in plant molecular biology, gene transfer and other aspects of plant biotechnology.

Preference will be given to candidates with both teaching and research experience in these fields.

Annual emoluments range from S\$28,340 to S\$58,750, the initial amount depending on the candidate's qualifications and experience. (U.S.\$1.00 = S\$2.13 approximately).

Leave and medical benefits are provided. Under the University's Academic Staff Provident Fund Scheme, the staff member and the University are each required to contribute at the present rate of 23% of his salary; the staff member's contribution being subject to a maximum of S\$920 a month. The sum standing to the staff member's credit in the Fund may be withdrawn when the staff member leaves Singapore/Malaysia permanently.

Other benefits include: a settling-in allowance of S\$1,000 or S\$2,000, subsidized housing at rentals ranging from S\$100 to S\$216 p.m., children's education allowance up to a maximum of S\$12,000 p.a., passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain fees up to the equivalent of 60% of annual gross salary in any one year.

Application forms and further information on terms of appointment may be obtained from:

**MR. PETER LIM, Director
North America Office
NATIONAL UNIVERSITY
OF SINGAPORE
61 West 62nd Street . . . Suite 4J
One Harkness Plaza
New York, New York 10023, U.S.A.
Tel: (212) 765-1670**

or:

**THE DIRECTOR,
Personnel Department
NATIONAL UNIVERSITY
OF SINGAPORE
Kent Ridge, Singapore 0511
REPUBLIC OF SINGAPORE**



POSITIONS OPEN

PHARMACOLOGIST OR TOXICOLOGIST. The Ohio State University, Division of Pharmacology, College of Pharmacy, invites applications for the position of assistant professor of pharmacology which will be available 1 July 1984. Qualified candidates should have a Ph.D. in pharmacology or toxicology, 2 years of postdoctoral experience, a commitment to quality teaching and research, and a willingness to work in a collaborative environment with six other pharmacologists. This is a tenure-track position with excellent prospects for an intellectually vigorous, academically oriented individual who has broad interests and strong communicative skills. The area of the candidate's subspecialty is less important than his or her competence and potential as a scientist and educator. Complete curriculum vitae and the names of at least three persons from whom letters of recommendation can be solicited should be sent to: **Dr. Allan M. Burkman, Chairman, Division of Pharmacology, College of Pharmacy, The Ohio State University, Columbus, Ohio 43210.** The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGY ASSISTANT PROFESSOR

A tenure-track position at the beginning assistant professor level is available 1 July 1984 in the Department of Physiology at the University of Kansas School of Medicine. Applicants must have a doctoral degree and at least 2 years of postdoctoral experience and demonstrated ability to establish and maintain an independent research program in cellular or molecular aspects of reproductive physiology or neurosciences. Teaching assignments may involve other areas. The department has sufficient laboratory space and start up funds to make this an attractive position to someone who can compete for grant funds on the national level. Applicants should submit curriculum vitae, a summary of research objectives, and the names of three references by 15 April 1984 to: **Dr. Gilbert S. Greenwald, Department of Physiology, University of Kansas School of Medicine, Kansas City, Kansas 66103.**

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

POSITIONS OPEN

PHYSIOLOGY

Assistant or associate professor, Ph.D. required, full-time, August 1984. Responsibilities include teaching two full-year courses: a medically oriented graduate physiology and an undergraduate human physiology, with laboratory, for biology majors. Postdoctoral teaching/research experience is required. Applicants should send résumé and three letters of recommendation by 7 April 1984 to: **Sister John Karen Frei, Ph.D., Director of Division of Biological and Biomedical Sciences, Barry University, Miami Shores, Fla. 33161.**

POSTDOCTORAL POSITION available 1 July 1984 to study membrane protein structure and subunit interactions. The research involves purified reconstituted lipid-protein systems. Send curriculum vitae and names of three references to: **Dr. P. J. Fleming, Department of Biochemistry, Georgetown University, Washington, D.C. 20007.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for 1 to 2 years starting July to study chemical and microbiological factors influencing leaching of toxic materials from coal. Candidates should have extensive experience in cultivating microorganisms and in modern analytical techniques including GC and HPLC. Send curriculum vitae and three letters of reference by 6 April to: **Dr. J. H. Tuttle, Chesapeake Biological Laboratory, Box 38, Solomons, Maryland 20688.** The University of Maryland is an Affirmative Action/Equal Opportunity Employer.

Anticipated **POSTDOCTORAL POSITIONS** for teaching and research starting August 1984, for 2 years to support one-half time teaching of laboratory sections in introductory biology and one-half time research in collaboration with a member of the faculty who provides the facilities. To obtain information on areas of research or to apply, send résumé and three letters of recommendation by mid-April to: **Paul Megrew, Department of Biology, University of Iowa, Iowa City, Iowa 52242.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

A POSTDOCTORAL OR MORE ADVANCED POSITION is available for a cell biologist with experience in clonogenic analysis of human tumor cells and training in biochemistry and pharmacology. Hands-on expertise in tumor and hematopoietic cell analysis techniques and a knowledge of neuro-oncology is advantageous. The candidate will work in a multidisciplinary laboratory focusing on the study of malignant brain tumors.

Present investigations include studies on the characterization of tumor cells, the specificity of anticancer treatment, and the reasons for drug resistance. Interested persons forward curriculum vitae and bibliography with the names of three references to: **Mark L. Rosenblum, M.D., Brain Tumor Research Center, Department of Neurosurgery, University of California, San Francisco, Calif. 94143.** The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

Two positions are open for **POSTDOCTORAL FELLOW** in the Department of Pediatrics, University of California, San Diego, for **molecular biologist—oncogene methylation.** Candidate must have Ph.D. and experience in all aspects of recombinant DNA technology, including gene cloning and restriction enzyme analysis. Project will be the analysis of the effects of methylation on human oncogenes in vivo and in vitro. Salary commensurate with experience. Persons interested please submit curriculum vitae and three references before 16 March 1984 to: **Dr. Robert M. Hoffman, Department of Pediatrics, M-009, University of California, San Diego, La Jolla, Calif. 92093.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study the regulation of phosphate uptake and release in bacteria in joint program with Air Products, Inc. Candidates should have a strong background in microbiology or microbial biochemistry. Send curriculum vitae and three references to: **Dr. Harlyn O. Halvorson, Rosenstiel Center, Brandeis University, Waltham, Mass. 02254.** Affirmative Action/Equal Opportunity Employer.

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SECTION LEADER Pharmacology Inflammatory Diseases

The successful candidate will conceive, direct and coordinate biological research of a professional team of scientists engaged in the discovery of novel agents for the treatment of inflammatory diseases. This individual will have a PhD and at least 5 years experience in immunology as related to inflammatory diseases. Expertise in both in vitro and in vivo models is essential. Most importantly, the Section Leader must have a record of innovative research in immunology, scientific leadership and administrative ability.

Please send resume in strictest confidence to: **Louis DeMartino, Manager of Employment, Box DD83-62, Schering-Plough Corporation, 60 Orange Street, Bloomfield, New Jersey 07003.**



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**Program Leader
(Millet Improvement)**

ICRISAT

To provide scientific and administrative leadership to the program of millet improvement at ICRISAT Center under the general supervision of the director of research. He/she will formulate and implement research programs that will meet the program goals set by the Institute. The Millet Improvement Program currently has subprograms in breeding, pathology, physiology, and microbiology involving 14 scientists. The program leader will coordinate research with other programs at ICRISAT Center, and between research at headquarters and in other countries. He/she will participate in the overall guidance and management of the Institute, in its global activities, and in fostering appropriate institutional interrelationships. *Qualifications:* Doctorate in an appropriate discipline with an excellent academic record, proven ability to lead a team of scientists and contribute to interdisciplinary research programs, and ability to speak and write English well are essential. Substantial experience in plant breeding, at least 10 years of postdoctorate research experience, and ability to speak French are desirable.

Salary for the position is at principal staff level, according to qualifications and experience, with attractive fringe benefits. Work would be centered at ICRISAT Center (1394 hectares) near Hyderabad, India, where excellent scientific and technical support is available. Hyderabad has international airline connections and good living conditions, recreational facilities, and medical and educational facilities (for children to age 10 to 12 years).

Send résumé and names of three referees by 31 March 1984 to: **Director General, ICRISAT Patancheru P.O. 502 324, Andhra Pradesh, India.**

CHEMIST

The Adolph Coors Company located in Golden, Colorado has an immediate opening for a Separations Chemist.

The selected candidate will contribute to the start up and expansion of the Biotechnology Division by participating in research and development and the design of processes focused on the isolation and purifications of products from biomass and fermentation broth.

This position requires a thorough knowledge of separation and recovery techniques and 5-10 years experience in this field on laboratory, pilot and production scales.

For a challenging and rewarding work experience, in addition to an excellent starting salary and company-paid benefits, send resume and salary history in confidence to:

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1221 Ford Street
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Si la découverte de MEDICAMENTS vous tente, rejoignez notre

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pharmacologie

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L'un sera spécialisé en Rhumatologie, il aura des connaissances approfondies

● en immunologie, ● sur les phénomènes biochimiques associés à l'inflammation, ● en analgésie.

L'autre sera spécialisé en Neuro-Psychopharmacologie privilégiant l'abord biochimique.

Pour un département existant, nous recrutons un

Cadre de recherches

en Pneumologie (niveau 3^e cycle en Sciences ou équivalent).

Il aura des connaissances en physiologie ou pharmacologie respiratoire, circulation pulmonaire, exploration fonctionnelle et pathologie expérimentale.

Dernière précision, notre Entreprise est française, du secteur privé. Elle s'enorgueillit d'être active au niveau mondial puisqu'elle exporte la moitié de ses découvertes.

Merci d'adresser lettre manuscrite rédigée en français, C.V. + photo, sous réf. 5502 (mentionnée sur l'enveloppe), à Média-System, 104 rue Réaumur 75002 Paris qui transmettra.

DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, National Institute of Mental Health (NIMH).

This is a Senior Executive Service position in the career Civil Service with an annual salary range of \$58,938 to \$69,600. Physicians may also be eligible for a Physicians' Comparability Allowance of up to \$10,000 per year. The position is located in Rockville, Maryland.

The National Institute of Mental Health provides leadership for the Federal effort in the promotion of mental health and its programs include intramural and extramural research, the administration of training programs to meet national mental health manpower needs, and the provision of technical services to States and communities. The Director manages a staff of 1,000 and a budget of \$278 million.

Minimum qualifications requirements include a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field relating to the health sciences, and progressively responsible experience in developing, administering, and evaluating mental health programs. Candidates must also have experience in the management of

mental health programs, demonstrating competence to assume leadership in planning, staffing, directing, coordinating, and allocating resources, and other responsibilities associated with executive leadership of a major national program.

Further information about the position and qualification requirements may be obtained by contacting Ms. Lois Mercer at (301) 443-5030. Applications (Personal Qualifications Statement, SF-171) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Mercer at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C-26, Rockville, Maryland 20857. Applications will be accepted without the SF-171, provided that the SF-171 is submitted upon request. Nominations and applications should be submitted by March 23, 1984.

Applications from women and minority group members are especially solicited.

THE ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY available involving cloning and expression of human tumor associated antigens in group headed by Dr. Joseph P. Brown. Applicants should have strong background in techniques in molecular cloning, DNA sequencing, and expression vectors. Send curriculum vitae and names of references to: **Anne Marie Moses, Oncogen, Suite 200, 3005 First Avenue, Seattle, Wash. 98121. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

To work on biochemistry and molecular biology of the glucocorticoid receptor. Stipend negotiated on basis of experience. Send curriculum vitae and names of three references to: **Dr. Gerald Litwack, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for recent Ph.D.'s in cell biology, biochemistry, or molecular biology to study structure and functional domains of the epidermal growth factor (EGF) receptor. Send curriculum vitae and names of two references to: **Dr. M. Das, Biochemistry and Biophysics, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.**

POSTDOCTORAL POSITION IN SYSTEMATICS. Appropriate fields: aquatic biology, botany, entomology, herpetology, ichthyology, invertebrate zoology and paleontology, mammalogy, ornithology; also anthropology. Must have received Ph.D. within last 5 years. Pays \$18,000, plus \$1,000 expenses; begins as early as 1 September; normally a 1-year appointment. Provide résumé, research plan, and three references by 15 May to: **Tilton Fellowship Committee, California Academy of Sciences, Golden Gate Park, San Francisco, Calif. 94118.**

POSITIONS OPEN

IMMEDIATE OPENING—POSTDOCTORAL

There is a position available now to work in a small group on an electron beam project. We need to add to our group someone with skills in the areas of **thin film technology, amorphous materials and/or UHV technology.** The project is one which has some industrial potential and may be of interest to someone who is aiming at a position in industry but would first like to broaden own experience. If you are interested and available now or in the very near future, send your résumé to: **Dr. A. V. Crewe, Enrico Fermi Institute, 5640 Ellis Avenue, Chicago, Illinois 60637. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL ASSOCIATE(S). One or two positions (research fellow or research associate, depending on experience) to work on the regulation of phospholipid metabolism in biological membranes. Research interests may include receptor mediated lipid turnover, enzyme purification (phospholipases), or aspects of cell biology (myocytes, platelets). Please send inquiries to: **Dr. H. H. O. Schmid, The Hormel Institute, University of Minnesota, Austin, Minn. 55912. Telephone: 507-433-8804. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.**

POSTDOCTORAL POSITION

Available April 1984 to study the biosynthesis, processing, and genetic control of enzymes of lysosomes and other subcellular organelles in normal and mutant mice. Experience in protein biochemistry, subcellular biology, and/or immunochemical techniques desired. Send curriculum vitae and names and telephone numbers of three references to:

**Dr. Richard Swank
Molecular Biology Department
Roswell Park Memorial Institute
666 Elm Street
Buffalo, N.Y. 14263
Telephone: 716-845-3429**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION/RESEARCH ASSOCIATE available spring 1984 for ongoing studies of human disorders of oculomotor control. Candidates with Ph.D., a background in microprocessor-based signal analyses, computer modeling of neurological systems and research experience (basic or clinical) in the oculomotor, visual or motor systems preferred. Salary dependent on whether candidate selects a postdoctoral position through Stanford University or a research associate position through the private Institute for Medical Research. Send résumé and three letters of reference by 1 April 1984 to: **J. Hotson, M.D., Department of Neurology, Santa Clara Valley Medical Center, 751 South Bascom Avenue, San Jose, Calif. 95128. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION. Immunologist with a background in genetics to work on developing the MHC of a marsupial under the supervision of William H. Stone, who is a distinguished professor at Trinity University and scientist at the Southwest Foundation for Biomedical Research. Minimum salary for the first year is \$18,500 with consideration made for prior relevant postdoctoral experience. Candidates should respond to: **Personnel Manager, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Texas 78284.** Please include curriculum vitae, including undergraduate and graduate transcripts, statement of research experience and interests, and names of three references.
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POSTDOCTORAL SCIENTIST. Position available for Ph.D. in biochemistry or related field to study lipoprotein metabolism and atherosclerosis in non-human primates under supervision of Dr. Rampratap S. Kushwaha, associate scientist. Applicant should be experienced with methods in protein biochemistry and metabolism. Minimum first year salary is \$18,500 with consideration made for prior relevant postdoctoral experience. Position available for 2 years with the opportunity for further extension or conversion to a staff position. Apply to: **Personnel Manager, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Texas 78284.** Include curriculum vitae, a description of research interests, and names of three references, including major professor, in initial correspondence.
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INTERUNIVERSITY REACTOR INSTITUTE DELFT, NETHERLANDS

The Interuniversity Reactor Institute (IRI) is a centre for research and education in the field of ionising radiation and its applications. Virtually all Netherlands universities participate in this project. IRI's up-to-date equipment includes a 2-MW nuclear research reactor, a 3-MeV Van de Graaff electron accelerator and a central process computer. Approximately 200 people are employed at the institute, 50 of whom are postgraduate and postdoctoral chemists and physicists.

A position has become vacant for a

full professor in the department of Radiochemistry

Research in this department is carried out in close cooperation with scientists from the participating universities. Until now the research programme of the department has been concerned with particularly neutron activation analysis and radio isotope techniques for application in the fields of environmental hygiene, medicine, chemistry, physics and the technical sciences. Attention is being paid increasingly to the behaviour of trace elements in the biosphere.

The appointee is expected to make a contribution towards stimulation of the present research programme and to develop new lines of investigation, in close cooperation with his fellow professor in the department. Teaching responsibilities include participating in the Institute's training courses and supervising undergraduate and postgraduate students. The appointee will be jointly responsible for the courses "Radiochemistry" and "Chemical aspects of Nuclear Technology" in the Department of Chemical Technology at the Delft University of Technology and he will be expected to take an active part in presenting these courses.

Candidates should be willing to acquire a good working knowledge of the Dutch language within two years from the date of appointment.

Salary indication: Max. appr. Hfl. 116.000,- per annum (before taxes).

Applications, including a curriculum vitae, a list of international publications and the names and addresses of at least two referees, should be sent to the dean of the Institute, prof.dr. J.J.M. de Goeij, IRI, Mekelweg 15, 2629 JB Delft, The Netherlands, within one month from publication of this advertisement. Drawing the attention of the dean to the names of possible candidates for the above position will also be appreciated. Informal enquiries may be addressed to the dean, who can be reached at the above mentioned address, or by telephone (31-15-786713/31-15-786171; after office hours: 31-1892-4472).

EDUCATION PROGRAMS MANAGEMENT

2 Opportunities

ARGONNE NATIONAL LABORATORY currently offers these two excellent positions for individuals with a combination of scientific, academic and/or laboratory backgrounds:

SECTION HEAD— PRE-COLLEGE AND MINORITY PROGRAMS

Principal responsibility involves the development, management and implementation of Argonne National Laboratory education programs in the following areas: increased participation by Historically Black Colleges in DOE programs, cooperation between Argonne National Laboratory and Atlanta University, and ANL/DEP involvement with pre-college students and teachers. The Section Head is responsible for securing steady external funding for these programs, supervises a small staff, and serves on the Division management team.

Qualifications required are 5 or more years experience in a major national research and/or higher education institution, including demonstrated background in program administration and funding proposal preparation. A familiarity with Historically Black Colleges and Universities science programs and issues in pre-college science and math education is important. Ph.D. or equivalent in Physical Science, Life Science or Engineering also required. Reply to BOX J-DEP-16488-55.

MANAGER— COLLEGE STUDENT PROGRAMS

Principal responsibility involves development and administration of a major college-level student research participation program at Argonne National Laboratory. Additionally responsible for management of a grad-level industrial residency program in Fusion Engineering, DOE residency program in Washington, D.C., and various activities aimed at promotion of university/Argonne research partnerships.

Position requires 3 or more years college level teaching/research experience or comparable national laboratory research experience, familiarity with undergraduate and graduate student research programs and ability to interact effectively with a wide variety of lab scientists. Strong organizational and interpersonal skills essential. Program administration experience, preferred. Reply to BOX J-DEP-16480-55.

Argonne National Laboratory offers a competitive salary and excellent benefits. For prompt consideration, send resume to appropriate box number. Applications must be received no later than March 20th, 1984.



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THE FIRST WORD IN... ADVANCED SCIENTIFIC SYSTEMS

Abbott Laboratories has been dynamic in the research and development of sophisticated medical products. Equally impressive have been the scientific applications designed for our advanced computer systems. Systems specialists have made major contributions to our R&D environment through the development of computerized research tools. These positions in our Pharmaceutical Products Division offer exceptional opportunities to work with state-of-the-art systems technologies.

SENIOR SCIENTIFIC SYSTEMS ANALYST

This key position interacts with management and scientists to establish objectives and requirements for the development of R&D systems. The incumbent will initiate and direct all phases of systems development, and coordinate all project activities. The successful candidate will have a Ph.D. in Computer Science or scientific discipline, coupled with 3-5 years experience in scientific, statistical or microcomputer applications to include 2 years in the design and development of scientific/ medical computer systems. Strong analytical and management skills are essential. Computer molecular design and graphics experience strongly preferred.

Also seeking SENIOR SCIENTIFIC PROGRAMMERS with experience in the design, testing and coding of scientific related FORTRAN programs. A BS/BA in Computer Science or related degree and 3 years on-line interactive real-time programming experience required.

SCIENTIFIC SYSTEMS ANALYSTS

The selected applicants will play a major role in the design and installation of R&D systems, develop recommendations for appropriate software packages, and provide user training to insure proper systems use. Candidates will have a BS/BA in Computer Science, scientific or engineering discipline, an MS is preferred, and at least 3 years scientific, statistical systems applications experience. Prior experience in a medical, research or scientific environment is required, and strong systems design and problem solving skills are essential.

NETWORK SPECIALISTS

These individuals will perform studies to determine the equipment and systems required to support our R&D operations. This responsibility includes evaluating hardware and software in support of projects for the Research Computing Network and developing and maintaining special purpose software. Installing and maintaining vendor supplied network and systems software is also involved. Qualifications include a Computer Science, Engineering, Scientific degree or equivalent plus 5-8 years combined experience in operating systems software, systems development, office automation, and computer performance analysis and capacity planning.

BIOMEDICAL ENGINEERS

Our research and development systems group seeks experienced Biomedical Engineers capable of developing innovative process control and quality control data collection systems for use in the production of third generation antibiotics. Based in the advanced technology section of our Pharmaceutical Products Division, those selected will assume responsibility for systems design including hardware selection, software design and development, and the installation of these systems. Qualified candidates will have a BSEE, at least 3-5 years experience in all aspects of hardware and software design, and a thorough knowledge of real-time data acquisition and process control applications on major OEM minicomputers.

Abbott Laboratories is a \$2.9 billion international leader in the health care products industry. Headquartered in an attractive suburban area on the Lake Michigan shoreline, just 30 miles north of Chicago, we provide excellent salaries, full benefits including profit sharing and stock retirement plan, and outstanding opportunities for career development and advancement. For immediate consideration, forward a resume, with salary history, in strict confidence to: Robert Levy, Dept. SM/Corporate Placement. Abbott is an Affirmative Action Employer.

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POSITIONS OPEN

POSTDOCTORAL POSITION available 1 July 1984 to study mechanisms of pulmonary toxicity of 3-methylindole in animals and in human pulmonary tissues. Experience in biochemical toxicology preferred. Maximum salary is \$19,000 plus medical and dental benefits. Send curriculum vitae and names and addresses of three references to: **Dr. Garold S. Yost, College of Pharmacy, Washington State University, Pullman, Washington 99164-6510. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH POSITION to study the biogenesis of small nuclear ribonucleoprotein complexes (snRNP's) containing U1 RNA. Experience with nucleic acids, protein isolation and/or recombinant DNA desired. Send curriculum vitae and names of three references to: **Dr. E. Wieben, Department of Cell Biology, Mayo Foundation, Rochester, Minn. 55905. An Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

POSTDOCTORAL POSITION. Study the molecular basis of mechanical transduction using single channel techniques [see Guharay and Sachs, *Neurosci. Abstr.* (1983)], immuno and electron histology. Quantitative approach with experience in electrophysiology and computers helpful. Established, well-equipped, automated laboratory with opportunity for extensive collaboration. **Dr. Frederick Sachs, Department of Biophysical Sciences, State University of New York, Buffalo, N.Y. 14214.**

TOXICOLOGIST

Contract toxicology laboratory located in the Northeast invites applications for a staff position in its toxicology department. Candidates must demonstrate ability and desire to direct short- and long-term toxicologic studies. Special preference will be given to those candidates having experience or strong interest in inhalation toxicology. Send résumé and names of three references to: **Box 56, SCIENCE.**

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS immediately available for studies in two areas:

- (i) **Stochastic processes** (especially random integral equations) in aerodynamics, and (ii) **stochastic processes in magnetic fusion energy research.**

Applicants should hold the Ph.D. with strong backgrounds in stochastic processes, aerodynamics or plasma physics, and computing. Send letter describing present research, curriculum vitae, and two letters of reference to:

A. T. Bharucha-Reid, Department of Mathematics and Computer Science, Atlanta University, Atlanta, Georgia 30314.

We are an Affirmative Action/Equal Opportunity Employer, M/F.

POSTDOCTORAL POSITION

A position will be available in May-June 1984. This position involves studies on the molecular biology of secreted toxins and other virulence factors of *Pseudomonas* sp.. The genes for two specific toxins of *P. aeruginosa* (hemolysin, exotoxin A) have been cloned. These gene probes will be used to conduct studies on the following aspects regarding these and possibly other toxins: transcriptional and translational regulation of toxin expression; structure function relationships including but not limited to sequencing studies and the significance of these toxins to the pathogenesis of *Pseudomonas* infections. Experience in basic recombinant DNA methods helpful but not absolutely required. Send résumé and three letters of recommendation to: **Dr. Michael L. Vasil, Department of Microbiology and Immunology, Box B175, University of Colorado Medical School, Denver, Colorado 80262. University of Colorado Health Sciences Center is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available 1 July 1984 to study electrophysiological properties of striatal neurons after experimental removal of dopaminergic input from the substantia nigra. Goal of the experiments is to understand the capacity of the nigro-striatal system to exhibit neuroplasticity following partial damage, and the relationship of that plasticity to recovery of behavioral function after brain damage. Experiments will involve the use of single-unit extracellular recording, iontophoresis, and biochemical assay of brain tissue punches. Send curriculum vitae and three letters of reference to: **Dr. Theodore W. Berger, Psychobiology Program, 465 Crawford Hall, University of Pittsburgh, Pittsburgh, Pa. 15260.**

POSTDOCTORAL RESEARCH ASSOCIATES. Two positions: (i) Cloning and regulation of tyrosine aminotransferase from *Drosophila hydei*. Experience in recombinant DNA techniques required. Salary competitive. Available 1 June 1984. (ii) Regeneration in cotton and *Phaseolus* and the isolation of hormonally regulated genes in the early development of the *Phaseolus* embryo. Available immediately. Send curriculum vitae and three letters of recommendation to: **Dr. Tom Brady, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE available this spring, to collaborate in studies of membrane transport processes. The project involves the study of cation transport in single cells, especially red cells, red cell ghosts and granulocytes, and related biochemical events in membrane preparations. We are particularly interested in the mechanism and regulation of the Na, K pump. Applicants should send curriculum vitae and two references to: **Dr. John R. Sachs, Division of Hematology, HSC T15-040, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794-8151. SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 22-84.**

POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral position is available immediately to investigate messenger ribonucleoproteins, especially their role in translation and in attachment of polyribosomes to the cytoskeleton. The work will utilize UV crosslinking and other advanced techniques, including antibodies and recombinant DNA. Candidates should have a recent Ph.D. in molecular or cellular biology, or in biochemistry. Send curriculum vitae and three letters of recommendation to: **Dr. Jay R. Greenberg, c/o PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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Research Scientist, Marine Organic Geochemistry

Fisheries and Oceans
Champlain Centre for Marine Science and
Surveys
Quebec City, Quebec

We require a senior scientist to be responsible for conducting a research program on behaviour pathways and fluxes of organic substances, particularly contaminants in the coastal marine environment. We will rely on you to carry on research in physical, chemical, and biological oceanography on processes in the Estuary and Gulf of St. Lawrence and in coastal waters in Northern Quebec. These activities will be transferred to a new research institute near Mont-Joli sometime in 1986-87.

You require a doctorate degree in oceanography with specialization in organic geochemistry from a recognized university, or a lesser degree with research experience and scientific productivity equivalent to a doctorate. In addition to extensive field and successful research experience, it is essential that you have published original articles. Willingness to work in the field in all seasons for long periods is mandatory. Knowledge of English and French is essential. Please note that in some cases language training may be offered.

We offer a salary ranging from \$26,834 to \$49,913 commensurate with your qualifications and experience.

Send your application and/or résumé and list of publications, quoting reference number 84-NCRSO-DFO-RES-5, to:
Joan Girling (613) 593-5331
Public Service Commission of Canada
Ottawa, Ontario

Closing date: 30 March 1984

Tout renseignement est disponible en français en s'adressant à la personne susmentionnée.

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Canada

POSITIONS IN MARINE POLICY

The Marine Policy and Ocean Management Program (MPOM) of the Woods Hole Oceanographic Institution (WHOI) seeks applicants for 1-3 positions at the Social Scientist and/or Senior Social Scientist levels. These Scientific Staff positions will become available in early 1984.

These positions will be filled by professionals with experience in marine policy research and having professional training in the social sciences, law, economics, or natural sciences.

Appointment as a Social Scientist will be given to an individual who (a) holds a Ph.D. Degree or has sufficient experience to do independent research, and (b) regardless of degrees held, has demonstrated qualities to conduct independent social or policy studies of high quality. These qualities should include: the capacity to identify significant questions concerning marine affairs; the ability to formulate and carry out programs to answer these questions; the ability to exercise judgement in the interpretation of results; and finally, the motivation to present the results to the judgement of others through lectures and publications.

Appointment as a Senior Social Scientist will be awarded to an individual who has shown continued excellence in research, or otherwise demonstrated a high level of performance in the study of marine affairs. These contributions should have gained the individual a significant international reputation. A Senior Social Scientist is responsible, not only for initiating and conducting independent studies, but also is expected through example, influence and advice, to promote the highest standards within the Institution and to be closely involved in planning the future development of social and policy studies within the Institution.

Both Social Scientists and Senior Social Scientists are expected to pursue independent research activities and, with the advise and assistance of MPOM, raise necessary research funds. This may involve collaboration with others in MPOM, elsewhere in the Institution, or other institutions.

For further information and application forms please contact Mr. Bernard Zentz, Director of Personnel, Woods Hole Oceanographic Institution, Woods Hole, MA. 02543. Salary will be based on qualifications and experience.

Equal Opportunity/Affirmative Action Institution.

UNIVERSITY OF ALBERTA DEPARTMENT OF GENETICS HUMAN GENETICS AND PLANT GENETICS

The Department of Genetics is seeking candidates who would qualify for external funding by the Natural Sciences and Engineering Research Council (as University Research Fellows) or the Alberta Heritage Foundation for Medical Research (as Scholars). Applicants who are successful in obtaining external support would be appointed as non-tenured assistant or associate professors (current salary—assistant professor: \$29,720 to \$41,820 per annum; associate professor: \$37,420 to \$53,658), with initial appointments for 5 years. The appointees would be expected to establish independent research programs and to carry limited teaching loads.

The department contemplates sponsorship of up to three such positions. Preference will be given to applicants specializing in any aspect of **HUMAN GENETICS** or **PLANT GENETICS**.

Candidates should have a minimum of 2 years of postdoctoral experience and be able to demonstrate superior research achievements and potential.

The department is well-equipped for studies of most aspects of cellular and molecular genetics, has extensive facilities for cultivation of plants, and has extensive access to the University computing facilities.

The present faculty of 14 (including three who occupy positions similar to those advertised here) have research interests including: the mechanisms of mutation, recombination and transposition, the organization and functioning of eukaryotic genes, mitochondrial biogenesis, pattern formation, the genetics of cell membranes, population genetics, human genetic epidemiology, the cytogenetics of wheat, and cultivation of native wild grasses.

Applicants should send curriculum vitae, the names of three academic referees, and reprints of principal scientific publications to: **Dr. David Nash, Acting Chairman, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada T6G 2E9**, prior to 1 May 1984. Further information can be obtained from the same address.

The University of Alberta is an Equal Opportunity Employer but, in accordance with Canada Employment and Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

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Sr. Scientist Protein/Glycoprotein

Hoffmann-La Roche is one of the world's leaders in the pharmaceutical industry.

Responsibilities: Protein isolation and characterization; analysis of carbohydrate components of natural and recombinant glycoproteins.

Qualifications: PhD in Biochemistry, 1-3 years postdoctoral experience in protein and glycoprotein isolation techniques and experience with glycoprotein characterization and structural analysis.

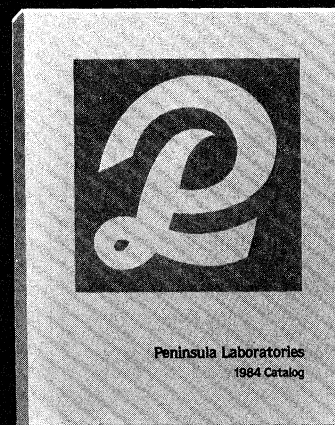
Roche offers an outstanding compensation package including an attractive bonus and an environment that encourages professional growth. **Please send resume to: Mrs. Eleanor M. Malone, Professional Employment & Staffing Specialist,**



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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE in reproductive biology to study the molecular basis for regulation of control and lifespan of corpora lutea. Predoctoral experience with radioimmunoassays and small animal physiology (male or female) desired. Requires U.S. citizenship or permanent residence visa in United States. Candidates should write to: **Dr. Lutz Birnbaumer, Professor, Department of Cell Biology, Baylor College of Medicine, Houston, Texas 77030**, and provide a list of references.

POSTDOCTORAL RESEARCH ASSOCIATES

Applications invited from persons with backgrounds in cell biology/biochemistry to study the role of all extracellular matrix interactions in oncogenic transformation. Desirable areas of expertise include protein and/or glycosaminoglycan characterization, immunological techniques, and cell culture. Please send curriculum vitae and three letters of recommendation to: **Dr. Susan P. Hawkes, Molecular Oncology Program, Michigan Molecular Institute (MMI), 1910 West Saint Andrews Road, Midland, Mich. 48640**. MMI is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 June 1984 to investigate the gene-specific expression of the actin multigene family during embryogenesis and tissue differentiation. Experience in nucleic acid biochemistry is preferred, although graduates with a background in cell biology and genetics, enthusiastic about quickly assimilating and applying recombinant DNA technology to biological problems, are also encouraged to apply. For additional information, send curriculum vitae and the names of references to: **Dr. David S. Durica, Department of Medical Biochemistry, College of Medicine, Texas A & M University, College Station, Texas 77843-1112**. Equal Opportunity through Affirmative Action.

The Department of Biochemistry, Rice University, announces the availability of **RESEARCH POSITIONS** for programs of research in the areas of cholesterol biosynthesis, sphingolipid chemistry and metabolism, and the regulation of sterol and isoprenoid synthesis by naturally occurring and synthetic inhibitors. Experience in bioorganic chemistry and/or analytical biochemistry of concerned compounds and/or of mammalian cell culture techniques highly desirable. Positions available immediately. Interested candidates should send résumé and names of three references to: **G. J. Schroepfer, Jr., Department of Biochemistry, Rice University, Houston, Texas 77251**. Rice University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH PSYCHOLOGIST

U.S. ARMY NATICK RESEARCH AND DEVELOPMENT CENTER NATICK, MASSACHUSETTS 01760

This is a career position in the Federal Service. Salary range: \$29,374 to \$38,185, commensurate with education and experience. Ph.D. in experimental psychology or human factors preferred.

Responsibilities include: independently planning and conducting research programs in human performance related to development of clothing and protective equipment; conducting laboratory and field studies to evaluate new clothing and equipment concepts; providing advisory services in human factors to product developers. Minimum requirements for this position are a bachelor's degree in psychology and 3 years of professional experience in appropriate subject matter area.

The Natick Research and Development Center is located 20 miles west of Boston. This position is in the competitive service and limited to citizens of the United States.

Send résumé and salary history to:

**U.S. Army Natick R & D Center
Attention: STRNC-BCR (Edward Hays)
Natick, Mass. 01760**

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POSITIONS OPEN

UNIVERSITY OF NEW HAVEN INSTITUTE OF COMPUTER STUDIES

RESEARCH ASSOCIATE positions are available starting in September 1984 for durations of up to 3 years. Candidates must possess an expertise in business, in applied/life science, or in engineering with a high level of computer-related skills. The ability to relate to many academic disciplines is essential. Independent research in a computer-related area is required concurrent with teaching and other Institute activities. Salary commensurate with qualifications. Send résumé, summary of research goals, and three letters of reference by 1 April 1984 to:

**Dr. Richard B. Jones, Director
Institute of Computer Studies
University of New Haven
P.O. Box 1306
West Haven, Connecticut 06516**

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RESEARCH MEMBRANE BIOCHEMIST

Howard University Cancer Center is seeking an individual with a Ph.D. in biochemistry. Applicants must be able to perform work in: (i) membrane protein biochemistry and purification with expertise in glycoprotein synthesis and secretion, (ii) enzyme kinetics, especially of proteases, (iii) ligand-receptor assay techniques, (iv) immunocytochemistry, and (v) tissue culture.

Interested individuals should submit their curriculum vitae and three letters of reference to: **Dr. Ken Olden, Deputy Director, Howard University Cancer Center, 2041 Georgia Avenue, NW, Washington, D.C. 20060**. Salary range: \$18,000 to \$20,000.

RESEARCH POSITIONS

(i) **Molecular Biologist** with interest and expertise in gene cloning and (ii) **Protein Biochemist** with interest and expertise in modern micro-techniques of protein sequencing, both for appointment to the Special Professional Faculty. The successful candidates must interface with ongoing programs in blood coagulation and fibrinolytic proteins. Interested individuals should submit a current résumé, including a publication list, plus names and addresses of three references to: **Dr. Morris Pollard, Lobund Laboratory, University of Notre Dame, Notre Dame, Indiana 46556**. The University of Notre Dame is an Affirmative Action/Equal Opportunity Employer.

RESEARCH SCIENTIST. Challenging position in San Francisco-based biotechnology firm for individual with expertise in tumor immunology. Requirements include Ph.D. in a related field and the adaptability to conduct both animal trials and in vitro assays. An excellent work atmosphere with academically oriented colleagues, excellent salary and benefits are offered to the individual with appropriate training, expertise, and capability to conduct independent research and be an important member of a team developing monoclonal antibodies for cancer therapy.

Please send curriculum vitae and three letters of recommendation to: **Box 51, SCIENCE**.

SENIOR APPLICATIONS CHEMIST R & D IN CALIFORNIA

The Spinc Division of Beckman Instruments is a world leader in the manufacture of instruments for medical and scientific research laboratories. We need a senior applications chemist to research and develop instrumentation for gel electrophoresis and DNA sequencing. For this position, a Ph.D. with 4 to 5 years in biological research and experience with DNA sequencing is required. Familiarity with Beckman instrumentation is a plus.

Beckman is a people-oriented company located near Stanford University, 30 miles south of San Francisco. We offer an excellent compensation package and a superior work environment. To apply, send your resume to: **F.A. Krueger, Beckman Instruments, Inc., 1050 Page Mill Road, Palo Alto, Calif. 94304**. Equal Opportunity Employer.

**Beckman Instruments
Spinc Division**

POSITIONS OPEN

QUANTITATIVE WILDLIFE ECOLOGIST, Michigan State University, assistant professor, 12-month, tenure-track, starting September 1984. The applicant will be expected to conduct research and publish results, in areas of wildlife population dynamics or biometrics. Major responsibilities include undergraduate and graduate student advising, teaching undergraduate courses in wildlife biometry and population analyses, and a graduate course in quantitative wildlife ecology. Applicants must possess a Ph.D. in wildlife ecology and have a commitment to teaching, research, and public service.

Submit résumé, undergraduate and graduate transcripts, publications, three letters of recommendation, and statement of research and teaching interests by 15 April 1984 to:

**Dr. Harold H. Prince
Search Committee Chairman
Department of Fisheries and Wildlife
Michigan State University
East Lansing, Michigan 48824-1222**

Michigan State University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE—The selected candidate will be involved in devising research plan for the design, synthesis, and development of new bifunctional chelating agents as radiopharmaceuticals for cardiac and tumor imaging—must demonstrate the ability to handle radioactivity, to use sophisticated instruments and techniques, to use infrared ultraviolet, mass and nuclear magnetic spectrometers, paper, thin-layer and high-pressure chromatography multichannel analyzer and gamma-ray scanner and counter, and so forth, to do independent research to prepare grant proposal and to publish scientific articles. **REQUIREMENTS:** Ph.D. in synthetic organic chemistry; 2 years of training in radiopharmaceutical preparation. Full time: 40 hours per week, 9 a.m. to 5 p.m. Salary: \$20,000 per year. If interested in and qualified for the above position, please forward your résumé to: **Case Number 4223, Division of Employment Security, Charles F. Hurley Employment Security Building, Government Center, Boston, Mass. 02114**. An Affirmative Action/Equal Opportunity Employer.

TEACHING FACULTY BIOLOGY RHODE ISLAND COLLEGE

We invite applications for a person to teach human anatomy and vertebrate physiology, to participate in master's level graduate program, and to conduct original research. Ph.D. required in anatomy or vertebrate physiology. Preference will be given to persons with demonstrated research and teaching capabilities. An active research program is expected. Continuing, tenure-line appointment commencing September 1984. Attractive fringe benefits. Appointment will be at the rank of assistant professor with starting salary up to \$24,000, depending on qualifications. **Applications must be received by 4 p.m. on 4 April 1984**. Submit letter of application, résumé, and three current letters of reference to: **Office of Personnel Services, Rhode Island College, 600 Mount Pleasant Avenue, Providence, Rhode Island 02908, Attention: Chair, Biology Department**.

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WASHINGTON UNIVERSITY SCHOOL OF MEDICINE VIROLOGIST

Applications are invited for a tenure-track faculty position in the Department of Microbiology and Immunology. Applicants should have demonstrated ability to perform original research in virology and an interest in teaching graduate and medical students. Send curriculum vitae and names of three references to: **Dr. Joseph M. Davie, Department of Microbiology and Immunology, Box 8093, Washington University School of Medicine, St. Louis, Mo. 63110**. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.

WILDLIFE PARASITOLOGIST. An entry-level, tenure-track position to begin August 1984. Ph.D. with expertise in wildlife or population ecology. Teaching duties include parasitology and supervision of general biology laboratories. Screening has begun and will continue until position is filled. Send transcripts, curriculum vitae, and three letters of recommendation to: **Dr. S. B. White, Department of Biological Sciences, Murray State University, Murray, Ky. 42071**. An Equal Opportunity/Affirmative Action Employer.

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The professional excitement is building at Abbott Laboratories' Diagnostics Division as we continue our progress in the production of a variety of new products for diagnostic testing. As a \$2.9 billion corporation committed to the development of innovative medical technologies, we are able to provide our research scientists with the strong support necessary for the continued expansion of our sophisticated product line.

PROJECT MANAGER — TISSUE CULTURE TECHNOLOGIES

We're looking for a dynamic individual to manage project design and implementation related to large-scale tissue culture methodologies. A Ph.D. in Cell Biology, Immunology, Biochemistry or a related field, with Post-Doctoral experience and background in mammalian tissue culture is preferred. Familiarity with defined culture media and novel culture methods will be an asset. Eventual responsibilities will include all phases of cell production, screening and propagation.

Catch the excitement at Abbott Diagnostics now. There's a tremendous future taking shape with professional opportunities that are keeping pace with our exceptional growth. We're located in an attractive suburban community on the Lake Michigan shoreline, 30 miles north of Chicago. Excellent salary and benefits include profit sharing. For consideration, send a resume in strictest confidence to: **Jeffrey Luke/Corporate Placement**. Abbott is an Affirmative Action Employer.

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Scientist

Bioassay Development

Genentech, Inc., on the SAN FRANCISCO PENINSULA, a recognized leader in the field of biotechnology research, has an opening for a Cell Biologist to work in the area of Bioassay Development.

Position involves development of tissue culture assays for DNA derived proteins and modification of existing bioassays. You will also have the opportunity to be involved with product related research in cell biology and will supervise bioassay development personnel, as well as interact frequently with other research and development departments.

Requires PhD in Biological Sciences coupled with thorough knowledge of and "hands-on" involvement in tissue culture-based assay development. Experience with mammalian cell culture aspects of cell biology, virology, cellular immunology and/or related fields required; ability to perform under time pressure in a rapidly changing environment essential.

We offer competitive salaries and excellent benefits including equity participation opportunities. Please send resume to Human Resources Department #1227, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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For Department of Plant Pathology, College of Agriculture, University of Minnesota.

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

TOXICOLOGY. An academic, nontenure-track staff position is available 1 June 1984. Provide leadership for development of computerized data base for 24-hour Animal Poison Control Center. Background in computer data base development and toxic substances necessary; advanced degree preferred. Salary commensurate with qualifications. Application with names of three references due by 1 April 1984 to: **Dr. William Buck, Department of Veterinary Biosciences, University of Illinois, 2001 South Lincoln, Urbana, Ill. 61801.** An Equal Opportunity/Affirmative Action Employer.

CALL FOR PAPERS

International Symposium on Lake and Watershed Management: Local Involvement
North American Lake Management Society
16 to 19 October 1984
McAfee, New Jersey

Contact: **Harry Gibbons, Jr., Department of Civil Engineering, Pullman, Washington 99164.** Telephone: 509-335-5294. Abstracts due 15 April. Award for best student paper.

MEETING

AMERICAN MALACOLOGICAL UNION 50TH ANNUAL MEETING. Norfolk, Virginia, 22 to 27 July 1984. International Symposium on the Physiological Ecology of Freshwater Molluscs, organized in honor of W. D. Russell-Hunter by A. J. Burky and R. F. McMahon. International Symposium on the Larval Ecology of Mollusks, organized by M. Vecchione. Also contributed papers, workshops, field trips, and so forth. Information: **Dr. Robert Robertson, President, Academy of Natural Sciences, 19th and the Parkway, Philadelphia, Pa. 19103.** Telephone: 215-299-1131.

COURSES

ELECTRON MICROSCOPY (TEM/SEM): Biological applications. Designed for professional and laboratory personnel who desire practical "hands on" training in basic techniques of TEM and SEM. Graduate credit and/or certificate awarded. Tuition: \$750. Date: 9 to 27 July 1984. For further information and registration form, contact: **Dr. Dan Scheirer, Department of Biology, Northeastern University, Boston, Mass. 02115;** telephone: 617-437-2260.

GIVEN INSTITUTE COURSES IN ASPEN, COLORADO. (i) An Introduction to Human Disease for graduate students in biological sciences, 8 July to 4 August 1984. Fellowships provided by the Josiah Macy, Jr. Foundation. Application deadline: 1 April 1984. (ii) A symposium on T-cell Receptors, Genetics, Structure and Function, 6 to 8 July. Registration: \$100 (trainees, \$50), limited to first 100 received. For information, write: **Dr. D. W. Talmage, Director, Box C290, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, Colo. 80262.**

CORAL REEF ECOLOGY: SESSILE ORGANISMS

Discovery Bay Marine Laboratory, Jamaica
9 July to 18 August 1984

Content: a field-oriented introduction to the ecology of cnidarians, sponges, bryozoans and algae. Instructors: **Buss, Land, Chornesky, Karlson, Wahle, Pomponi, Slocum, Woodley, and Land.** Write: **Dr. J. Lang, Zoology, University of Texas, Austin, Texas 78712;** telephone: 512-471-7131.

PROGRAMS

PFIZER SCHOLARS PROGRAM FOR NEW FACULTY

Pfizer Pharmaceuticals will award, to junior faculty, grants of \$50,000 per year for up to 3 years beginning 1 January 1985. Physicians having (i) a full-time faculty appointment below the level of associate professor; (ii) not more than 3 years of full-time faculty experience or 5 years of post-residency research experience; (iii) no principal investigator status on an approved and funded National Institutes of Health regular research grant (or equivalent award); and (iv) a proven research interest in cardiovascular medicine, diabetes, infectious diseases, psychiatry, or rheumatology are invited to apply. The application deadline is 25 July 1984. For further information and application materials, please write:

Rita Wroblewski, M.D., M.P.H.
Director of Medical Affairs
Pfizer Pharmaceuticals
235 East 42 Street
New York, N.Y. 10017

AWARDS

ARE YOU INTERESTED IN WORKING IN SPACE BIOLOGY?

National Aeronautics and Space Administration (NASA) is offering several **RESEARCH ASSOCIATE AWARDS** for scientists to work in laboratories capable of providing scientific advice and facilities relevant to **SPACE BIOLOGY.** The awards will vary from \$15,000 to \$19,000 based on experience. Proposals are due 1 April for 1 July funding and 1 October for 1 January funding. Eligible: U.S. citizens having Ph.D., D.Sc., M.D., D.D.S., or D.V.M. For information/application forms, contact (specify award date you are applying for): **Dr. X. J. Musacchia, Chairman, NASA Award Committee, Graduate School, University of Louisville, Louisville, Ky. 40292,** or **Dr. Thora W. Halstead, Space Biology Research Associates Program, Life Sciences Division, NASA Headquarters, Washington, D.C. 20546.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS

The Graduate Program in Craniofacial Biology at the University of Southern California offers scientists in early stages of their careers postdoctoral fellowships in a biomedical environment. Applicants must have a Ph.D. in biochemistry, cell biology, immunology, or molecular biology and/or D.D.S. or M.D. **Funds available for U.S. citizens or permanent residents only.** Fellowships are available beginning July 1984. Please submit curriculum vitae and three letters of reference before 15 April 1984 to: **Dr. H. C. Slavkin, Chairman, Graduate Program in Craniofacial Biology, University of Southern California, University Park, GER 317, Los Angeles, California 90089-0191.** An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOWSHIP. Immediate opening in laboratory investigating the physiology of placental lactogens in the mouse. Strong background in reproductive physiology and experience in radioimmunoassay, steroid receptor assay, and tissue culture methods highly desirable. Curriculum vitae and three letters of reference to: **Dr. Frank Talamantes, Thimann Laboratories, University of California, Santa Cruz, California 95064.** An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship in neurophysiology starting 1 July 1984. Research will entail extracellular recording in visual, vestibular, and oculomotor systems of alert trained monkeys with emphasis on quantitative techniques and computer analysis of data. Additional training available through strong on-going neurobiology graduate program. Two-year commitment desirable. Stipend: \$17,500 (partially tax exempt). University housing available in close proximity. Send résumé, brief statement of research training, and three references to: **Dr. Bernard Cohen, Mt. Sinai School of Medicine, New York, N.Y. 10029.** Telephone: 212-650-7068. Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

FRED M. RODDY POSTDOCTORAL FELLOWSHIP available immediately. The project involves functional electrical stimulation with the following possible areas of intensive research: environmental physiology; cardiopulmonary physiology; thermoregulatory stress exercise for individuals in wheelchairs. Applicants should send curriculum vitae along with two references to: **Dr. Jerrold S. Petrofsky, National Center for Rehabilitation Engineering, Wright State University, Dayton, Ohio 45435.**

A **POSTDOCTORAL FELLOWSHIP** is available in protein crystallography related to active sites and regulatory mechanisms, including enzymes modified at the DNA level by recombinant techniques. Applicants from the area of small molecule crystallography will also be considered.

Applicants may write to: **Professor William M. Lipscomb, Gibbs Chemical Laboratory, Harvard University, Cambridge, Mass. 02138.** Harvard University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP is available to study reproductive cell antigens in relation to infertility. Experience in immunochemistry is required. Additional experience in hybridoma techniques and/or lymphokines is preferred, but not required. Send curriculum vitae and names of three references to: **Dr. Subbi Mathur, Department of Basic and Clinical Immunology and Microbiology, Medical University of South Carolina, Charleston, South Carolina 29425.**

POSTDOCTORAL FELLOWSHIPS IN CHEMISTRY OF PROTEIN HORMONES (2 or 3 years), BEGINNING JULY 1984 OR EARLIER.

Opportunities available for Ph.D.'s in an interdisciplinary group, studying polypeptides of human and animal pituitaries, using modern gas phase microsequencing, GC/mass spectrometry, and peptide synthesis, to isolate, identify chemically, and synthesize hitherto unknown pituitary peptides. U.S. citizens/permanent residents, experienced in the above, or in recombinant DNA technology, are invited to apply. Stipend: \$27,000, plus travel. Send curriculum vitae and names of three references to: **Dr. A. F. Parlow, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, Calif. 90509.**

ASSISTANTSHIPS

GRADUATE ASSISTANTSHIPS IN VETERINARY ANATOMY, PHYSIOLOGY, PHARMACOLOGY OR TOXICOLOGY

Department of Structural and Functional Sciences, School of Veterinary Medicine (SVM), University of Wisconsin-Madison, has assistantships available for M.S. and/or Ph.D. degree programs. Qualifications include the D.V.M. degree from an AVMA-accredited institution or the B.S. degree in a biological science field and admission to an appropriate graduate degree program. Research opportunities in respiratory physiology and pathophysiology, neuroendocrinology, reproductive physiology, bone growth, neuroanatomy, neurophysiology, molecular parasitology, pharmacology, and toxicology. Send résumé and statement of interests to: **Dr. G. S. Mitchell, SVM, 2015 Linden Drive West, Madison, Wis. 53706.** An Equal Opportunity/Affirmative Action Employer.

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Allied, a 12-billion dollar diversified company, has made a major commitment to growth in Human Medical Diagnostics.

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We seek an individual to lead a major new program in life science. The ideal candidate will have a Ph.D in immunochemistry, molecular genetics or a related field and have worked extensively in areas such as immuno diagnostics, microbiology, or cell biology.

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Scientists

Senior Scientist

Ph.D in Biochemistry or Immunology. Post-Doctoral Research or Industrial experience working with monoclonal anti-bodies to human neoplastic cells. Job Code SRSC.

Principal Scientist

Position involves reagent formulation, stabilization, and optimization. Ph.D in Chemistry with 6-8 years' experience required. Simplex optimization methodology background a plus. Job Code PLS.

Principal/Senior Scientist

Work on emulsion stabilization and packaging, Ph.D/M.S. in Chemistry/Pharmacology with 2-5 years' experience. Job Code PSS.

Electrochemist

We are looking for a dynamic individual with a solid background in electroanalytical chemistry. The successful candidate will possess a Ph.D. in electrochemistry, with 3-5 years' industrial or post-doctoral experience in the theory, development, and application of electro-chemical techniques. A background in clinical/organic/biochemistry is a definite plus. We are seeking a knowledgeable, enthusiastic individual for this hands-on position requiring excellence in problem solving, creativity, communication and leadership. Job Code ELCH.

Senior Scientist

To handle ion selective electrode design and evaluation, and take electrodes from breadboard stage into manufacturing. Experience with electrode manufacturing processes is essential. BS/MS/PhD in Chemistry or Chemical Engineering required. Job Code SRST.

Senior Scientist

Seeking a product oriented Senior Scientist with applied (versus theoretical) experience in immunology and antibodies. Job Code SSC.

Biochemist

Evaluate biotechnologies having application in in-vitro diagnostic tests including immunodiagnostics, monoclonal antibodies and DNA probes. Design or develop diagnostic tests using technology available within IL or at other Allied divisions. Guide designs through production phase. MS biochemistry with 5-10 years' experience diagnostics or biotechnology. Knowledge of immunology, monoclonal antibody technology. Job Code BCH.

IL offers an excellent salary and benefits package. Please forward resume including salary requirements and specifying job code for the position you are interested in to Mr. Paul A. Smith, Jr., Dept. S, Instrumentation Laboratory, 113 Hartwell Avenue, Lexington, MA 02173. We are an equal opportunity employer, M/F.

Engineers

Mechanical Engineer-Optics

Hands-on position with design experience in optical systems. Must be knowledgeable in area of spectrophotometry as applied to analytical measurements. BS/MS/PhD and 5-10 years' experience required. Job Code MEO.

Electronics Engineer

We seek a systems oriented, hands-on person with electro-mechanical skills to handle instrument design and interface with manufacturing. Experience in analog design for high impedance sensors and familiarity with EMI shielding techniques are a definite plus. BS/MS and 5-10 years' experience required. Job Code ELE.

Senior Electronics Engineer

Design control and signal processing circuitry for biomedical instrumentation, using discrete digital and analog circuitry in combination with microprocessor technology interfaced with electrochemical and optical sensors. Select and specify all components. Manage construction of prototype and electronic systems. Guide design through production phase. MSEE preferred with 5 years experience. Job Code SEE.

Senior Mechanical Engineer

Design and manage construction of prototype fluid handling and sampling systems for biomedical instrumentation. Layout total instrument architecture. Specify materials and components for high precision fluid control. Specify biomaterials to be used in diagnostic test such as films, membranes and filters. Job Code SME.

Management Project Manager

Seek individual to manage new instrument development program within our Biomedical R&D Group. Must have demonstrated ability to manage project from concept to manufacturing release and interface with Quality, Manufacturing and Marketing personnel at all levels. Medical instrumentation background required with blood gas instrumentation experience a strong plus. The ideal candidate will have an MS in Engineering with an MBA and an understanding of chemistry. Job Code PRM.

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