

dergrowth or into the giant panda's interaction with other, cohabiting vertebrates.

One major new finding is that pandas must have access to at least two bamboo species within a small area and be able to migrate to another suitable habitat if the bamboo in one habitat flowers and dies. The giant panda's precarious status has worsened in historical times, as the need for agricultural land has devoured old panda habitat, especially migratory routes and areas upon which pandas relied for additional food resources during periods of especially severe nutritional stress. Also, Schaller and co-workers have shown dramatic differences in the nutritional quality of bamboo of different species, between different parts (stems, leaves, and shoots) of the plant, and between parts of differing age, as well as between seasons.

Through trapping, marking, and radio-telemetry, the authors provide the first information on home range size, movements, activity budgets, and behavior of giant pandas in the wild, based on results from seven individuals followed for varying time periods over the 18-month study. Giant pandas seem to be active about 60 percent of the time, the majority of which is devoted, not surprisingly, to feeding on bamboo, 99 percent of their total diet. Giant pandas are solitary, and males were found to have only slightly larger home ranges than females (3.9 to 6.4 square kilometers). Both sexes may travel seasonally long distances to find adequate food. Despite the enormous



"Gao Huahang takes notes on a wild female in a maternity den near the Fengtongzhai Reserve. [From *The Giant Pandas of Wolong*; courtesy of Forest Department, Baoxing]

time giant pandas spend ingesting and processing food, the authors suggest that the poor nutritional quality of bamboo means that these herbivorous carnivores are existing at all times close to their energetic limits.

The authors rarely saw giant pandas during this study. Indeed, each encounter with a panda seems to receive special notice, with transcriptions of field notes included. The limited descriptions of wild giant panda behavior are supplemented by descriptions of captives that offer few new data, given previous descriptions by other authors. In some cases, these observations are followed

by conclusions about giant panda natural history and evolution that could not be reached in an 18-month study of any animal with a potential life-span of well over 20 years.

The final chapters, on communication and reproductive behavior and the comparison with related species, include a discussion of the giant panda's taxonomic position. The authors compare many panda characteristics with those of bears, raccoons, and red pandas but do not assess the relative importance of each factor with regard to giant panda phylogeny. Schaller *et al.* conclude that giant pandas are most closely related to red pandas and that both species are allied with the bears, which is not fully supported by the most recent biochemical and cytological analyses (O'Brien, personal communication).

The authors do not address the conservation program in any detail. This will be the subject of a future book. We look forward to this and additional future reports on the demography, population dynamics, social and mating systems, behavior, and genetics of the giant panda as they are completed by this unique collaborative research program.

DEVRA G. KLEIMAN

JOHN SEIDENSTICKER

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Washington, D.C. 20008

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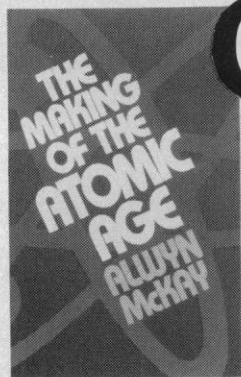
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"The female Zhen has climbed into the low branches of a hemlock to avoid a courting male." [From *The Giant Pandas of Wolong*; photograph by George Schaller]

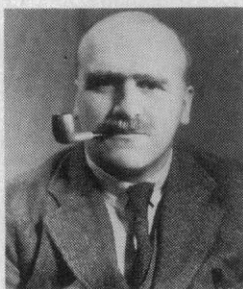


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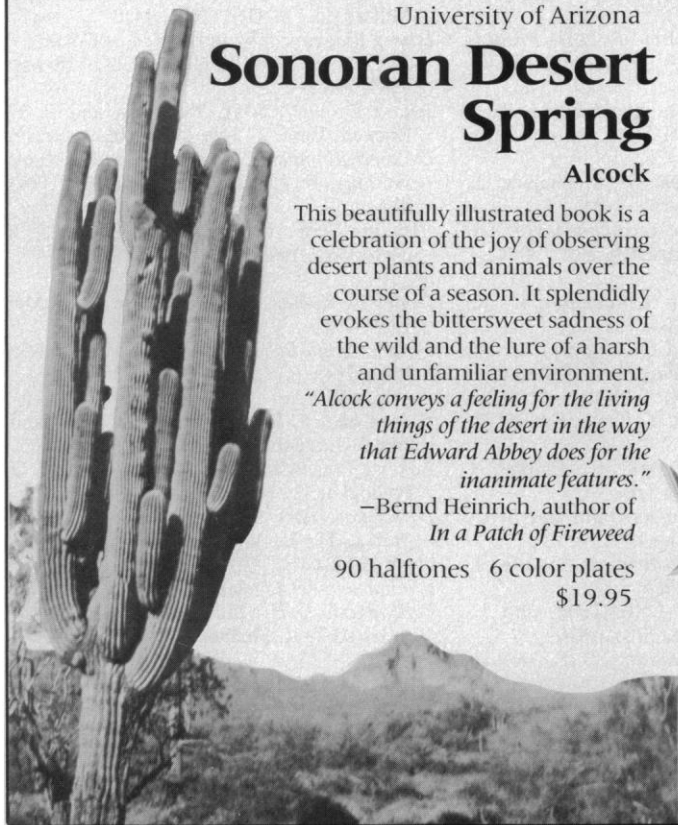
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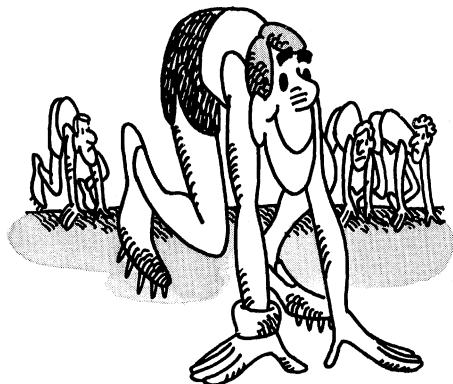


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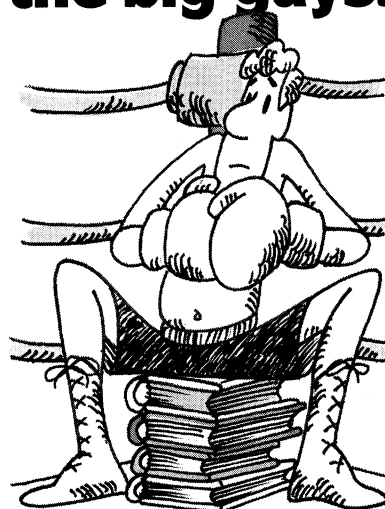
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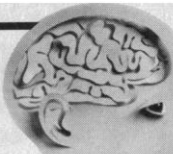
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Monoclonal Antibodies. Standardization of Their Characterization and Use. Karger, Basel, 1984. viii, 437 pp., illus. Paper, \$72. Developments in Biological Standardization, vol. 57. From a symposium, Paris, July 1983.

Mononuclear Phagocyte Biology. Alvin Volkman, Ed. Dekker, New York, 1984. xx, 502 pp., illus. \$75. Immunology Series, vol. 26. From a conference, Wrightsville Beach, N.C., May 1982.

Mouse Liver Neoplasia. Current Perspectives. James A. Popp, Ed. Hemisphere, Washington, D.C., 1984. xii, 184 pp., illus. \$59.95. Chemical Industry Institute of Toxicology Series.

Muelos. A Stone Age Superstition about Sexuality. Weston La Barre. Columbia University Press,

New York, 1984. xvi, 141 pp. \$22.50; paper, \$10.95.

Multilinear Algebra. D. G. Northcott. Cambridge University Press, New York, 1984. x, 198 pp. \$39.50.

A Practical Guide to Graduate Research. Molly Stock. McGraw-Hill, New York, 1985. xiii, 168 pp. Paper, \$10.95.

Prehistoric Agricultural Strategies in the Southwest. Suzanne K. Fish and Paul R. Fish, Eds. Arizona State University Department of Anthropology, Tempe, 1984. x, 388 pp., illus. Paper, \$17.50. Arizona State University Anthropological Research Papers No. 33. From symposia, San Diego and Los Angeles, 1981.

Prehistoric Europe. Timothy Champion *et al.* Academic Press, Orlando, Fla., 1984. x, 359 pp., illus. \$45.

Prehistory of the Southwest. Linda S. Cordell. Academic Press, Orlando, Fla., 1984. xx, 409 pp. illus. \$49. New World Archaeological Record.

The Primary Production in the Sahel (PPS) Project. A Bird's-Eye View. H. Breman and P. W. J. Uithol, Eds. Centre for Agrobiological Research (CABO), Wageningen, Netherlands, 1984. 113 pp., illus. Paper.

Principles of Fermentation Technology. Peter F. Stanbury and Allan Whitaker. Pergamon, New York, 1984. xiv, 255 pp., illus. \$43; paper, \$17.50.

Probability, Statistics, and Decision Making in the Atmospheric Sciences. Allan H. Murphy and Richard W. Katz, Eds. Westview, Boulder, Colo., 1985. xii, 547 pp., illus. \$50; paper, \$25.

Problems and Methods for Lithospheric Exploration. Roberto Cassinis, Ed. Plenum, New York, 1984. viii, 222 pp., illus. \$49.50. Ettore Majorana International Science Series (Physical Sciences), vol. 19. From a course, Erice, Sicily, March 1982.

Problems of Collapse and Numerical Relativity. Daniel Bancel and Monique Signore, Eds. Reidel, Boston, 1984 (distributor, Kluwer, Hingham, Mass.). x, 381 pp. \$59. NATO ASI Series C, vol. 134. From a workshop, Toulouse, France, Nov. 1983.

Recent Developments in Alcoholism. Vol. 3. High-Risk Studies; Prostaglandins and Leukotrienes; Cardiovascular Effects; Cerebral Function in Social Drinkers. Marc Galanter *et al.*, Eds. Plenum, New York, 1985. xxiv, 323 pp., illus. \$45.

Reproductive Decisions. An Economic Analysis of Gelada Baboon Social Strategies. R. I. M. Dunbar. Princeton University Press, Princeton, N.J., 1985. x, 266 pp., illus. \$40; paper, \$14.50. Monographs in Behavior and Ecology.

Research Methods in Neurochemistry. Vol. 6. Neville Marks and Richard Rodnight, Eds. Plenum, New York, 1985. xx, 372 pp., illus. \$52.50.

The Robotics Revolution. The Complete Guide for Managers and Engineers. Peter B. Scott. Basil Blackwell, New York, 1985. xvi, 345 pp., illus. \$24.95.

Rural Development and Human Fertility. Wayne A. Schutjer and C. Shannon Stokes, Eds. Macmillan, New York, and Collier Macmillan, London, 1985. xii, 318 pp. \$38.50. Based on a conference, April 1983.

Science versus Practice. Chemistry in Victorian Britain. Robert Bud and Gerrylyn K. Roberts. Manchester University Press, Dover, N.H., 1984. 236 pp. \$35.

Selection and Use of Engineering Materials. F. A. A. Crane and J. A. Charles. Butterworth, Boston, 1984. xii, 303 pp., illus. \$49.95.

Statistical and Mathematical Methods in Population Dynamics and Pest Control. R. Cavalloro, Ed. Published for the Commission of the European Communities by Balkema, Rotterdam, 1984. x, 243 pp., illus. \$26. From a meeting, Parma, Italy, Oct. 1983.

Stress and Tension Control 2. F. J. McGuigan, Wesley E. Sime, and J. Macdonald Wallace, Eds. Plenum, New York, 1984. xii, 408 pp. \$50. From a conference, Brighton, England, Aug. 1983.

Tables for Converting Polynomials and Power Series into Chebyshev Series. Herbert E. Salzer and Norman Levine. Applied Science Publications, New York, 1985. Various pag. Paper, \$12.

Tissue Culture of Epithelial Cells. Mary Taub, Ed. Plenum, New York, 1985. xxii, 288 pp., illus. \$45.

Trends in Ecological Research for the 1980s. June H. Cooley and Frank B. Golley, Eds. Plenum, New York, 1984. viii, 344 pp., illus. \$52.50. NATO Conference Series I, vol. 7. From a workshop, Louvain-la-Neuve, Belgium, April 1983.

Tropical Plant Diseases. H. David Thurston. American Phytopathological Society, St. Paul, Minn., 1984. viii, 207 pp., illus. Paper, \$12.

Underdeveloping the Amazon. Extraction; Unequal Exchange, and the Failure of the Modern State. Stephen G. Bunker. University of Illinois Press, Urbana, 1985. xvi, 280 pp. \$24.50.

Understanding Dental Caries. Vol. 1. Etiology and Mechanisms: Basic and Clinical Aspects. Gordon Nikiforuk. Karger, Basel, 1985. xiv, 303 pp., illus. \$34.75.

Personnel Placement

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

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21 June issue (mailed 14 June): **31 May**
28 June issue (mailed 21 June): **7 June**

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Box (give number)
SCIENCE
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

POSITIONS WANTED

Botanist (Ph.D. 1983). Extensive experience in electron microscopy, microdissection, and cytohistochemistry. Research interests in developmental initiators, host/pathogen interactions, herbicide effects, and wound responses. Publications. Desires postdoctoral providing additional expertise in recombinant DNA techniques; protein isolation, purification, analysis; mono-, polyclonal antibodies; radioimmunoassay. Box 115, SCIENCE. X

Cell Biologist. Ph.D. (1981). Experienced in cytoskeleton research and cytogenetics. Knowledge of transmission and scanning electron microscopy, immunofluorescence, tissue culture, and genetics; 3½ years of postdoctoral work, publications, varied teaching experience. Seeks junior academic/or research associate position. Available September 1985. Box 113, SCIENCE. 5/17, 24

Computer Scientist. Ph.D. Michigan, 1981, seeks academic/research position in use of mathematical models and software to study and analyze complex biological systems, for example, endocrine systems. Publications; industrial experience; excellent references. Box 106, SCIENCE. 5/17, 24, 31

Immunologist. Ph.D. Academic and industrial research experience in cellular and molecular immunology, lymphokines, immunoassay development, hybridoma and monoclonal antibodies. Excellent publications and references. Seeking academic or industrial position. Box 108, SCIENCE. 5/17, 24

Medicinal/Peptide Chemist—Ph.D.—Group leader with extensive experience in the pharmaceutical industry in the design and synthesis of biologically active peptides. Strong background in solution and solid phase technology, purification techniques, analytical development, and production scale-up. Numerous patents and publications. Box 105, SCIENCE. 5/17, 24, 31

POSITIONS WANTED

Biomedical Writer/Editor. One of Washington, D.C.'s busiest and most productive independent professionals, specializing in health sciences and health policy, seeks return to West Coast roots in a responsible and challenging scientific/technical editorial position. Negotiable on percent time and compensation; if you can only afford me half-time, I'll work for you half-time. Self-employed for 9 years as founder and sole proprietor of Life Sciences Editorial Service, serving clients coast to coast, making approximately \$50,000 annual income from an office at home. A "self-starter" (obviously), responsible, efficient, and certifiably not a clock-watcher. Clients include universities; health and human services agencies; White House Conference; editorial service firms; magazine, journal, and book publishers; manufacturers; and many, many others. Rare combination of basic research, clinical laboratory, and university teaching background, *plus* extensive newspaper, science magazine, scholarly journal, database, and special report experience, demonstrated ability to explain highly technical information clearly for readers of any level, *plus* extensive computer experience, including telecommunications and original programming for editorial work. Original writing. Interviewing. Literature search/analysis. Copy-editing. Rewriting. Computer-assisted indexing. Supervision/technical review of literally thousands of articles written by other science writers. Awards. Highly regarded, excellent references. Peter L. Petrakis, Ph.D., M.P.H., 3604 Bel Pre Road, Silver Spring, Md. 20906. Telephone: 301-949-4226. 5/17, 24

Plant Scientist. Ph.D. 1975. Research and teaching experience in plant tissue culture (carrot and conifers), plant physiology. Seeks academic or industrial position. Box 114, SCIENCE. 5/17, 24

M.S. Reproductive Biology. 8 years of experience in gamete culture, IVF. Publications. Excellent references. Seeks academic/industrial/private position in Mid-Atlantic area. Chris Cabot, 805 11th Street, Davis, Calif. 95616. X

POSITIONS OPEN

ANALYTICAL CHEMIST—COMPUTER APPLICATION: Involves development and application of computerized data collection and processing systems for use in the operation of production-oriented analytical toxicology and chemistry lab. Responsible for development and application of new assay procedures and supervision of support technicians. Must have Ph.D. or equivalent in analytical chemistry; an in-depth knowledge of state-of-the-art analytical techniques including gas chromatography and high-performance liquid chromatography; knowledge and demonstrated ability to interface analog and digital analytical instrumentation to laboratory computers for data acquisition; knowledge of computer languages—INFO, BASIC, FORTRAN, and programming techniques for database management; 40 hours per week (basic); \$32,400 to \$34,560 per annum. Send résumé to: **Connecticut State Job Service, 90 Washington Street, Hartford, Conn. 06106; attention: Laviere.** Refer to Job Order Number 0414144. An Equal Opportunity Employer, M/F.

ANALYTICAL RESEARCH MANAGER

The Chemical Research and Development Center is seeking qualified applicants for the position of analytical division chief. This position is a GM-15 with a salary ranging from \$52,262 to \$67,948, depending on qualifications. Applicants must have a Ph.D. or equivalent professional experience in chemistry or related disciplines; substantial research experience and strong evidence of scholarship in analytical chemistry and methodology, quality assurance and control, mass spectrometry, and UV, visible, IR and laser spectroscopy as evidenced in publications, or innovative leadership in research administration. U.S. citizenship and the ability to obtain a security clearance are required. The mission of the Analytical Division involves basic and applied research to support the Army's Chemical Defense Program by maintaining a state-of-the-art technology in sampling, detection, quantification, and identification of hazardous chemicals.

Send letter of application, statement of research interests, and curriculum vitae within three weeks of this ad to: **Dr. Ed Pozioemek, Director of Research, Chemical Research and Development Center, Aberdeen Proving Ground, Md. 21010-5423.**

We are an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ANATOMIST

Anatomist, Ph.D., for full-time teaching position beginning August 1985. Primary teaching responsibilities will be in neuroscience and histology with some possible involvement in gross anatomy and embryology. Candidate is encouraged, but not required, to develop an active research program.

Northwestern College of Chiropractic is a 4-year postbaccalaureate institution.

Send curriculum vitae and names and telephone numbers of three references to:

Jane Michels
Northwestern College of Chiropractic
2501 West 84 Street
Bloomington, Minnesota 55431
An Equal Opportunity Employer

The Immunobiology Division of the Department of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine has openings for **two tenure-track positions** at the **ASSISTANT PROFESSOR** level. Candidates should have at least 2 years of postdoctoral experience and a background in molecular biology and immunology or membrane immunobiology. Applicants should have expertise in cellular receptors and growth factors and an interest in regulation, cell growth, and differentiation in immune and nervous systems. Familiarity with flow cytometry, biochemistry, and immunological techniques desirable. Successful candidates will have demonstrated ability to develop an independently funded research program. Send curriculum vitae, bibliography and names of three references to: **Mark I. Greene, M.D., Ph.D., Director, Immunobiology Division, Department of Pathology and Laboratory Medicine/G3, University of Pennsylvania School of Medicine, 36th and Hamilton Walk, Philadelphia, Pa. 19104.** *The University of Pennsylvania is an Equal Opportunity Employer.*

ASSISTANT PROFESSORS OF PHYSIOLOGY

The Department of Physiology and Biophysics at Case Western Reserve University, which is in the midst of a major faculty recruitment drive and faculty improvement, has available several tenure-track assistant professor positions. Candidates with strong credentials in neurophysiology and secretion-coupling are especially encouraged to apply; however, outstanding candidates in all areas of cell physiology and biophysics will be given serious consideration.

The terms are highly competitive and the appointment provides an excellent opportunity to develop a strong, independent research program in an expanding department and in the growing research community at Case Western Reserve.

The application should include curriculum vitae, a brief statement of present and proposed research interests, representative reprints, the names of four references, and should be sent to: **Dr. Antonio Scarpa, Department of Physiology, Case Western Reserve University, Cleveland, Ohio 44106.**

An Equal Opportunity/Affirmative Action Employer

BIOTECHNOLOGY RESEARCH ASSOCIATES FOR INDUSTRIAL/ACADEMIC COOPERATIVE PROJECT

Interdisciplinary multiyear research program involving the Departments of Chemical Engineering, Microbiology and Biochemistry, in collaboration with a major industrial corporation, to develop novel separations of products from genetically altered microorganisms. At least two positions are available. Both positions will offer the potential for interaction with faculty in biological and engineering sciences to develop new approaches for industrial scale protein separations. One position is for an individual with background and interest in **recombinant DNA and/or molecular genetics** to develop genetic alterations enhancing isolation and recovery of proteins from microorganisms. Another position is for an **enzymologist/protein chemist or biochemical engineer experienced in these areas** to develop new technology for protein separations. Applicants must have a Ph.D. in the areas described.

Application deadline: 31 July 1985. To apply, send curriculum vitae, a statement of past research experiences, and two letters of reference to

Dr. James B. Blair
Department of Biochemistry
West Virginia University Medical Center
Morgantown, W.Va. 26506

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

POSITIONS OPEN

ASSISTANT PROFESSOR

Applications are invited for a position at the level of assistant professor in the Department of Pharmacology of the Yale University School of Medicine. Applicants must have the Ph.D. degree, postdoctoral experience, and a strong commitment to develop antineoplastic agents. The position is for a bio-organic chemist or a medicinal chemist with interest and experience in the design and synthesis of cancer chemotherapeutic agents and in elucidation of the molecular mechanisms by which they express their cytotoxic actions. Interested candidates should send curriculum vitae, transcripts, reprints, description of areas of research interests, and the names of three individuals who are familiar with the candidate's abilities by 1 July 1985 to: **Dr. John P. Perkins, Department of Pharmacology, Yale University School of Medicine, New Haven, Conn. 06510.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF PHARMACOLOGY. Applications are being solicited for a 12-month, tenure-track position at the assistant professor level in pharmacology. The successful applicant will have an earned doctorate in pharmacology and have the potential to develop an independent research program. A significant portion of time will be spent teaching pharmacology to second year medical students. Experience in educational activities is, therefore, desirable. Interested individuals are asked to submit curriculum vitae and three letters of reference to: **Dr. Alvin S. Levine, Assistant Dean and Director, Terre Haute Center for Medical Education, Indiana University School of Medicine, 135 Holmsted Hall, Terre Haute, Ind. 47809.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

Tenure-track **ASSISTANT PROFESSOR POSITIONS** are available in the Department of Pharmacology, University of Iowa, College of Medicine. Applications are invited from well-trained individuals who possess the Ph.D. and/or M.D. degree and who are active in an area suitable for development of a vigorous research program related to molecular and cellular pharmacology or more traditional pharmacological disciplines. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.* Submit curriculum vitae and names of three references to:

Search Committee
Department of Pharmacology
Bowen Science Building
University of Iowa
Iowa City, Iowa 52242

THE UNIVERSITY OF SYDNEY CHAIR OF PHYSICS (ASTROPHYSICS) Reference Number 16/05

Applications are invited for the chair of physics (astrophysics) which will become vacant in the School of Physics at the end of 1985, following the retirement of Professor B. Y. Mills.

Salary will be at the rate of A\$52,026 per annum (under review).

Applications in duplicate, quoting reference number, including curriculum vitae, list of publications, and the names and addresses of three referees, by 31 July 1985, to: **The Registrar, University of Sydney, New South Wales 2006, AUSTRALIA, from whom further information is available.**

The University reserves the right not to proceed with any appointment for financial or other reasons.

Equal Employment Opportunity is university policy.

DEPARTMENT CHAIRPERSON. The Ohio State University College of Veterinary Medicine invites nominations and applications for the position of chairperson for the Department of Veterinary Physiology and Pharmacology. Applicants should hold the Ph.D. or equivalent degree and have demonstrated excellence in research, administration, communication skills, and a commitment to professional and graduate education. Duties include administration of a department with programs in physiology, pharmacology and toxicology, and assistance with college planning and administration. Salary is negotiable. Nominations or applications including curriculum vitae and names of three references should be sent to: **Dr. L. E. Heider, The Ohio State University, College of Veterinary Medicine, 1900 Coffey Road, Columbus, Ohio 43210-1092.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMICAL TOXICOLOGY. Postdoctoral position will be available fall 1985 in biochemical toxicology. Responsibilities will include fundamental research on hydrolytic enzymes involved in foreign compound metabolism. A background or interest in protein chemistry and/or genetic manipulation is desirable. Candidates should have a Ph.D. in biochemistry, chemistry, or a toxicologically relevant subject. Applicants should send detailed curriculum vitae, transcripts, list of publications, and names, addresses, and telephone numbers of three references to: **Bruce D. Hammock, Departments of Entomology and Environmental Toxicology, University of California, Davis, Calif. 95616, by 15 July 1985.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

CARDIOVASCULAR PHYSIOLOGIST, Ph.D., or GRADUATE STUDENT with major interest in assisted circulation, to help set up laboratory and clinical research program involving left and right ventricular assist devices. Opportunity to continue own funded grant work in this field. Private foundation directed by cardiac surgical group with university affiliation. Send curriculum vitae to:

Drs. Gannon, Lindberg, Satterfield and Anderson
2545 Chicago Avenue, Suite 611
Minneapolis, Minnesota 55404

CHEMIST RESEARCH ASSOCIATE, postdoctoral for individual with background in purification and analysis of polar organic natural products. Research project focuses on the isolation and identification of semiochemicals that affect the oviposition behavior of insects. Previous experience in HPLC, counter current chromatography, spectroscopy, and other analytical chemical procedures for water and alcohol soluble compounds desirable. This is an Agricultural Research Service (ARS), U.S. Department of Agriculture (USDA) position, GS-11. Salary: \$26,381 for 1 year, with probable renewal for a second year. U.S. citizenship required. *Equal Opportunity Employer.* Send résumé to: **Dr. J. H. Tumlinson, Insect Attractants, Behavior and Basic Biology Research Laboratory, USDA, ARS, P.O. Box 14565, Gainesville, Fla. 32604 or telephone: 904-374-5730.**

CLINICAL SCIENTIST POSITION: Institute of Applied Physiology and Medicine (IAPM), a nonprofit research organization in Seattle, wants M.D. or Ph.D. to develop noninvasive peripheral vascular and abdominal ultrasound research program in existing clinical practice. Research interests include new techniques and device development. Negotiable salary plus exam interpretation fees. Send résumé to: **IAPM, 701 16th Avenue, Seattle, Wash. 98122.**

ECOLOGIST with training in behavioral ecology and population sampling. Full-time research on dynamics and habitat selection of Southern tree squirrels. U.S. Forest Service, Clemson, S.C. GS-408-11. Starts at \$26,381. Apply by 31 May to: **Announcement Number 400-5-0059-SE, U.S. Department of Agriculture-ARS-SEU, Room 409, Building 003, BARC-West, Beltsville, Md. 20705.** Information: **Telephone: 803-656-3284.** *Equal Opportunity Employer.*

FACULTY POSITION—ANATOMY

Applications are invited for an **assistant professor of anatomy.** This special appointment is contingent on the applicant being successful in obtaining a Medical Research Council of Canada (or equivalent) Scholarship, which is awarded for a period of 5 years. A Ph.D. and/or M.D. or D.D.S. degree and minimum of 2 years of postdoctoral experience are essential. Candidates with strong productive research in immunocytochemistry, endocrinology, cellular pathology, or experimental teratology will be given preference. The successful applicant will be expected to devote at least 75 percent of time to research with limited teaching duties. Ability to teach human gross anatomy, histology, or embryology will be an asset. Candidates should arrange to have a copy of their curriculum vitae and three letters of recommendation sent to:

Dr. M. G. Joneja,
Professor and Head
Department of Anatomy
Faculty of Medicine
Queen's University
Kingston, Ontario, Canada K7L 3N6

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Persons of both sexes are encouraged to apply. Deadline for applications, including references, is 7 June 1985.

THE UNIVERSITY OF CALGARY FACULTY POSITION IN EXERCISE PHYSIOLOGY

A faculty position is available in the Department of Medical Physiology or appropriate Department in the Faculty of Medicine, The University of Calgary, Calgary, Alberta. The successful applicant will have the major portion of his or her time available to establish an independent laboratory for investigation of physiology of muscular exercise. The applicant should have a background in evaluating training maximal performance in competitive athletes, in cardiorespiratory physiology, and in physical education. Applicants with expertise in control of breathing, respiratory muscle function, and pulmonary gas exchange will be given preference. Limited opportunities will be available to the successful applicant for the teaching of medical and graduate students.

The rank level of appointment and salary will be commensurate with experience and qualifications within The University of Calgary scale. The successful applicant will be expected to compete for salary and establishment support from the Alberta Heritage Foundation for Medical Research. All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents.

Deadline for receipt of applications is 1 June 1985. Interested candidates should send their curriculum vitae, a brief description of field of interest, and the names of three referees to:

Dr. W. L. Veale
Professor and Head
Department of Medical Physiology
Faculty of Medicine
The University of Calgary
3330 Hospital Drive, NW
Calgary, Alberta, Canada T2N 4N1

ASSISTANT ENVIRONMENTAL SCIENTIST—

Ph.D. in Nuclear Engineering. Graduate work should include research experience in radiological assessments using applicable regulations and standards techniques, procedures and analytical tools available for radiological analysis. Research should also include the areas of meteorology, demography, hydrology, and radiation biology and nuclear energy facilities and processes. Assess the radiological impacts of operations involving radioactive materials in terms of dose equivalents to the general population, occupational exposures, environmental contamination and related health effects, and provide written descriptions of predicted radiological impacts for inclusion to environmental assessments, impact statements, and other technical reports. Responsibilities include: 1) collect, collate & evaluate available data to establish a base line at a given site; 2) estimate radioactive releases to the environment by referencing existing data or by the use of established models, computer codes, and extrapolations from similar situations; 3) predict the dispersion of radioactive material by air and water, uptake by humans via inhalation & ingestion, direct exposure and exposure via other environmental pathways; 4) determine individual and collective doses to workers and the general population; 5) predict the health effects from the exposure data; 6) evaluate environmental data collected in the field and reconcile it with the predictions from various models and codes to ascertain a realistic exposure to the general population; 7) interpret and evaluate data in the light of existing regulations and standards; 8) evaluate environmental monitoring programs to determine their adequacy and to recommend modification to such programs, if appropriate. Salary: \$2750/mo.—40 hours per week/8:30am—5:00pm. Geographical area of employment: Southwest suburb of Chicago.

SEND RESUME TO: ILLINOIS JOB SERVICE, 910 South Michigan Avenue-Room 400, Chicago, IL 60605, Attention: Minaflor Y. Jaskowiak, Reference #4155-J, AN EMPLOYER PAID AD.

Macy Fellowships in Science Broadcast Journalism

WGBH-Boston, a major producer of broadcast programs, including NOVA, seeks six proven science writers with a strong record of published writing for a general audience. Successful applicants will be highly skilled journalists willing to risk their talents on a new career in broadcast science journalism.

In return for that commitment, WGBH will train Fellows for a year in the special skills of communicating science stories on radio and television. Training will be rigorous, and will require making programs for broadcast, in a working professional environment.

The Fellowships' second year will begin in January, 1986, and carries a stipend of \$25,000. Applications must be received by July 1, 1985.

For details, please send a letter of interest and a resume to:

David Kuhn, Director
Macy Fellowships
WGBH
125 Western Avenue
Boston, MA 02134



Cell and Molecular Biology POSTDOCTORAL POSITIONS

Postdoctoral positions are available in the Cell Biology Group at the Worcester Foundation for Experimental Biology. The faculty and their research interests are:

Earl Baril: Enzymology of eukaryotic DNA replication.

Edward Berger: Cell-cell interactions and differential gene expression in Dictyostelium.

William Crain: Actin gene expression in embryonic development.

Grant Fairbanks: Organization and function of erythrocyte and sperm plasma membrane.

Clare O'Connor: Protein modifications during gametogenesis; development of cell polarity.

Thoru Pederson: Nuclear ribonucleoproteins and messenger RNA processing.

Joel Richter: Transcriptional and translational regulation in *Xenopus* oocytes.

Harriet Robinson: Retroviruses, oncogenes, cell growth and differentiation.

Greenfield Sluder: Timing and molecular control of mitotic events during early development.

David Steffen: Murine leukemia virus gene expression and oncogenicity.

Richard Vallee: MAPs, monoclonal antibodies, mitosis, neuronal cytoskeleton.

Samuel Wadsworth: Structure and function of *Drosophila* oncogenes, growth factors and receptors.

George Witman: Generation and control of flagellar movement in *Chlamydomonas* and mammalian sperm.

David Wolf: Diffusion and control of membrane regionalization; sperm maturation and capacitation.

Paul Zamecnik: Synthesis of modified oligonucleotides for chemotherapy.

Carol Ziomek: Membrane structure and cell polarity in early mouse development.

The institute is founded on a basic research philosophy and fosters an open, collegial environment conducive to scientific interactions.

Send curriculum vitae and names of references to faculty member(s) of interest to: Cell Biology Group, C/O Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545, USA.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F/H



WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY

POSITIONS OPEN

CLINICAL CHEMIST. The University of Chicago Medical Center, Clinical Chemistry Laboratory, is seeking a highly motivated Ph.D. in biochemistry or closely related field for the position of clinical chemist. A minimum of 5 years of experience as a clinical chemist in a hospital or commercial clinical chemistry laboratory is required. Teaching experience and expertise is also required. Experience in toxicology and therapeutic drug monitoring is preferred. Responsibilities will include: methodology evaluation and development; equipment evaluation; quality control; quality and accreditation assurance; continuing education and training for technologists, medical students, and medical house staff. Applicants should submit their curriculum vitae (including three personal references) along with a letter summarizing their interest and career goals by 1 June to: **S. T. Shaw, Jr., M.D., Director, Clinical Laboratories, The University of Chicago Medical Center, 5841 South Maryland Avenue, Box 404, Chicago, Ill. 60637.** An Affirmative Action/Equal Opportunity Employer.

DRUG ABSORPTION, METABOLISM AND CNS SELECTIVITY

A postdoctoral position is available immediately in the Department of Pharmacology and Toxicology, University of Kansas (KU), Lawrence, for an innovative pharmacologist/biochemist interested in pursuing research on intestinal and blood-brain barrier transport and metabolism of drugs.

The investigations will involve principally sulfation, decarboxylation, and oxidation of drugs and prodrugs with the aim of obtaining information which will lead to novel strategies for obtaining CNS-selective agents. Experience with autoradiography and enzyme assays would be advantageous. The research will collaborate closely with scientists in the INTERx Department of Merck Sharp & Dohme Research Laboratories, which is situated on the KU Campus.

Send curriculum vitae and names of three references to: **Dr. C. G. Gardner, Department of Pharmacology and Toxicology, University of Kansas, Lawrence, Kansas 66045.**

FACULTY POSITION IN AUDITORY NEUROPHYSIOLOGY

The Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, invites applications for a nontenured faculty position for teaching and research. Applicant must have a comprehensive knowledge of and previous experience in the field of electrophysiology of the auditory system, physiology of the vestibular system, behavioral techniques, mathematical data analysis, computer support, and basic biochemistry. A Ph.D. in neurophysiology and at least 3 years of postdoctoral experience are required. Candidates should exhibit evidence of an independent research program related to dysfunction of the auditory system and must be interested in and have the ability to interact productively with M.D.'s and other allied health professionals involved in clinical research. A principal responsibility includes teaching medical students and otolaryngology residents in fields of auditory and vestibular physiology and providing laboratory training for them. Candidates should submit curriculum vitae, list of publications, and names of three references to: **C. T. Sasaki, M.D., Chief, Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** Deadline for applications is 27 May 1985.

Yale University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION—VIROLOGY

The Department of Virology and Epidemiology, Baylor College of Medicine, invites applications for a tenure-track position in a research-oriented department. We seek an innovative individual with a strong foundation in animal virology to establish an independent, high-quality research program in **MOLECULAR VIROLOGY** and to contribute to the departmental graduate program. Appointment will be made at the assistant professor level; salary will be competitive. Applicants should have a Ph.D. or M.D. degree and postdoctoral training. Interested persons should reply by 15 June 1985, by sending curriculum vitae, statement of research interests, and the names of three references to: **Dr. Janet S. Butel, Search Committee, Department of Virology and Epidemiology, Baylor College of Medicine, 1 Baylor Plaza, Houston, Texas 77030.** Baylor College of Medicine is an Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION—BIOCHEMISTRY. The Department of Biochemistry, University of Virginia School of Medicine, invites applications for a tenure-track, full-time faculty position at the assistant or associate professor level starting no later than 1 September 1986. Applicants must exhibit a strong commitment to teaching, and to establishing a vigorous, independent research program. The candidate must have a doctoral degree in biochemistry or a closely related field with postdoctoral experience; however, applications are encouraged from all outstanding candidates irrespective of their current interests. Please submit letter of application, curriculum vitae, and three reference letters to: **Dr. Ching-hsien Huang, Chairman of Search Committee, Department of Biochemistry, Box 440, University of Virginia School of Medicine, Charlottesville, Virginia 22908.** Application deadline is 1 August 1985. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION—EMERGENCY MEDICINE

Applications are being accepted for a faculty position of assistant professor in the Department of Emergency Medicine, University of Cincinnati College of Medicine.

Responsibilities include the development of basic and clinical research with application to emergency medicine including areas in resuscitation, reanimation, and environmental stress; development and procurement of research funding; participation in research seminars, lectures, and conferences; participation in education of emergency medicine fellows and residents.

Qualifications include an M.D. degree with residency and fellowship training in emergency medicine; expertise in pharmacology or cardiovascular physiology is required; knowledge of computer programming and advanced statistical analysis is expected; experience with animal modeling and physiologic monitoring is expected; previous application of basic research to clinical resuscitation is desired; evidence of prior grant development and procurement is preferable.

This will be a full-time, faculty position with tenure potential; promotions based upon research productivity and educational contribution to the Department of Emergency Medicine. Primary appointment with Department of Emergency Medicine with secondary appointments in other departments is possible. Send curriculum vitae no later than 1 June 1985 to: **Richard C. Levy, M.D., Director, Department of Emergency Medicine, University of Cincinnati College of Medicine, ML Number 769, Cincinnati, Ohio 45267-0769.**

FACULTY POSITIONS MEMBRANE EXCITABILITY

Department of Physiology and Biophysics
The University of Iowa College of Medicine

We invite applications from individuals with a strong record of innovative research in the areas of muscle and nerve membrane biophysics. We are particularly interested in individuals using current strategies of whole cell and patch voltage clamp to study cellular and molecular mechanisms underlying development and regulation of excitability and interactions between excitable cells. Please send curriculum vitae, description of research plans, and the names of three references to: **Dr. Kurt Beam, Department of Physiology and Biophysics, The University of Iowa City, Iowa 52242.**

The University of Iowa is an Equal Opportunity/Affirmative Action Employer

IMMUNOLOGIST/BIOCHEMIST. The University of California San Francisco (UCSF) is recruiting an adjunct assistant or associate professor of medicine to direct the Hybridoma Core Facility within the Arthritis/Immunology section at the San Francisco VA Medical Center. Responsibilities include research, teaching, and supervision of a facility that develops new monoclonal antibodies against both soluble and cell-surface antigens. Requirements include a Ph.D. in microbiology, biochemistry, or a related field, with experience in hybridoma production and protein purification. Published research in related areas and teaching ability are important considerations. Position and salary will be dependent on qualifications. Send curriculum vitae and three letters of reference to: **Dr. William F. Seaman, Chief, Arthritis/Immunology, VAMC (111R), 4150 Clement Street, San Francisco, Calif. 94121.** UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN

FACULTY POSITION PHYSIOLOGICAL BIOMECHANICS

The School of Human Biology at the University of Guelph invites applications for a tenure-track position at the assistant professor level. The person we are seeking is one with a Ph.D. or equivalent doctoral degree, an active research programme, and teaching experience in one or more of the following: cardiovascular mechanics; orthopaedic biomechanics; pulmonary flow; ergonomics and occupational biomechanics; and neuromuscular control. Responsibilities will include teaching of undergraduate and graduate courses, supervision of graduate students and research related to human biomechanics.

The School of Human Biology is in a phase of growth and interactive development. The School's current areas of strength include: quantitative biomechanics, work physiology, physical anthropology, morphology, human and medical genetics, ergonomics, and physiological aspects of behavior.

Applications for this position (which is subject to budgetary approval) should include curriculum vitae and names of three referees and should be sent prior to 31 July 1985.

Dr. Stan R. Blecher, M.D., FCCMG
Professor and Director
School of Human Biology
University of Guelph
Guelph, Ontario, Canada N1G 2W1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

INSECT PHYSIOLOGIST. Full-time research and teaching position at assistant professor level, available 1 January 1986. Seeking person who will provide leadership in basic and applied programs dealing with semiochemicals that influence behavior and physiology of insects. Applicants should have Ph.D. and experience in insect behavior and natural products chemistry. Send résumé and three letters of reference by 15 July 1985 to: **Dr. Lowell R. Nault, Department of Entomology, The Ohio State University—OARDC, Wooster, Ohio 44691.** Equal Opportunity/Affirmative Action Employer.

JUNIOR FACULTY MEMBER (assistant professor) to work in the investigation of T cell responses to paramyxoviruses in mice. Applicant must have a Ph.D. or M.D. degree and at least 2 years of experience working in the field of T cell responses to murine viruses. The applicant should have demonstrated the ability to produce original research in the areas of cell mediated immunity to murine viral infections, including investigation of control of T cell responses to viral infection as it relates to pathogenesis. Salary: \$33,000 per annum. Send résumé to: **Division of Employment Security, Hurley Building, Boston, Mass. 02144,** and refer to job reference number 5481.

The College of Engineering at the University of California is engaged in the development of a new cross-disciplinary program in materials that would involve several existing departments and lead to a graduate program. Provisional searches for up to **FOUR POSITIONS** in the broad areas of **METALS AND CERAMICS** have been initiated. Outstanding candidates with interests in one or more of the following areas are invited to apply; structure-property relations in metals and ceramics; advanced analytical and high-resolution electron microscopy; and the mechanics of materials. Senior applicants with extraordinary records of research will be considered; junior candidates will be expected to demonstrate exceptional potential for scholarly achievement. The complementary skills of the candidates will be considered, and an effort will be made to recruit a group of individuals with strong interest in cross-disciplinary collaboration. The metals and ceramics group will also complement strong thrusts in the areas of polymers and electronic materials.

Applicants are encouraged to respond as soon as possible; applications will be received until positions are filled. Applicants should send professional résumé containing teaching and research accomplishments and three references to:

Robert Mehrabian, Dean
College of Engineering
University of California
Santa Barbara, Calif. 93106

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

Staff Scientists

Positions are available for investigators among the following areas:

- 1) Immunological aspects of CNS, auditory, or vestibular function.
- 2) The biophysics of auditory receptor cells or neurons.
- 3) The neurobiology of animal sensorimotor systems for orofacial and laryngeal control.
- 4) Language development in normal and communicatively impaired children.
- 5) The development and application of sensory aids to improve the communication of the severely hearing impaired.
- 6) Biostatistics, with an emphasis on tests and measurement or on the development of genetic analyses as they relate to communication disorders.

These are full-time research positions supported by Institute funds. Preference will be given to applicants who have demonstrated a potential to establish and maintain productive research programs. Letters of inquiry or applications consisting of a vitae, representative reprints, and a brief description of research interests, should be sent to:

Dr. Walt Jesteadt
Boys Town National Institute for
Communication Disorders in Children
555 N. 30th Street
Omaha, NE 68131
an equal opportunity employer

Immunologist

Research position available for Ph.D. Immunologist to study immune complexes and idiotypes of autoantibodies in human diseases. Experience with hybridoma production, isoelectric focusing and electrophoretic transfer techniques required.

Applicants should submit curriculum vitae, statement of research interests and two letters of reference to Vincent Agnello, M.D., Lahey Clinic Medical Center, PO Box 541, 41 Mall Road, Burlington, MA 01805.

An equal opportunity employer.



**LAHEY CLINIC
MEDICAL
CENTER**

Postdoctoral Scientists Cell Physiologists/ Pharmacologists

SmithKline Beckman, a world leader in health care and technology is seeking Postdoctoral Scientists to join an interdisciplinary research program in an environment designed to foster creative, innovative research and to promote personal and professional growth.

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

Our postdoctoral appointments are of 1 year duration and with mutual agreement renewable for a 2nd year.

The successful candidates will:

- participate in the cardiovascular-renal research program devoting major effort to study membrane transport at the cellular level, using cell culture, electrophysiology, and electron probe techniques.
- develop and evaluate *in vivo* and *in vitro* models for characterizing effects of pharmacologic agents on transport systems.
- work in collaboration with other groups to correlate physiological and biochemical events in cells and tissues.
- publish work in scientific literature.

Candidates are required to have:

- a Ph.D. in Pharmacology or Physiology with 0-2 years postdoctoral experience.
- experience using isolated tissue, microelectrodes and/or cellular preparations.
- excellent oral and written skills.

Preference will be given to candidates who have:

- background in histology and/or microscopy.
- interest in advanced analytical techniques (i.e. Electron Probe microanalysis).

SmithKline Beckman offers an excellent benefits and compensation program, including an attractive relocation package. For confidential consideration, send your C.V. to Mr. Walter B. Flagg, SmithKline Beckman Corporation, 1592 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

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Associate Senior Investigator Renal Pharmacology

The Pharmacology Department of Smith Kline & French Laboratories is seeking an outstanding scientist to develop and direct a research program in Renal Pharmacology in collaboration with others. This position offers the opportunity for creative, innovative research in an environment which fosters personal and professional growth.

The successful candidate will:

- apply known state-of-the-art technologies/theories and develop new methodologies where applicable to the discovery of drugs to treat diseases of the renal and cardiovascular systems.
- assist in compound selections and/or acquisitions.
- prepare scientific reports of merit for oral presentation and publication.
- maintain a high degree of literature familiarity.

Candidates are required to have:

- a Ph.D. in Pharmacology, or in Physiology with relevant experience in Pharmacology, at least 1 year of relevant postdoctoral experience.
- specific research experience in and commitment to: 1) mechanisms of hypertension, 2) diuretic/natriuretic hormones, or 3) mechanism of renal epithelial solute transport. Knowledge and experience with renal clearance and renal epithelial techniques are desirable.
- a demonstrated record of bibliographic excellence.
- the capacity to initiate and develop novel research and drug discovery programs in Pharmacology.
- excellent oral and written skills.

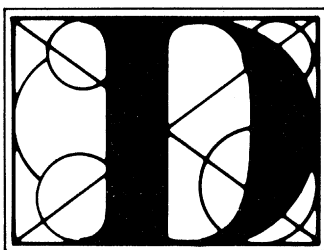
Preference will be given to those who also have:

- experience in *in vivo* experimentation.
- a demonstrated ability to interact in an interdisciplinary fashion.

SmithKline Beckman offers an excellent benefits and compensation program, including an attractive relocation package. For confidential consideration, send your C.V. and names of 3 references to: Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1584 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer M/F/H/V.

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Protein Chemist



What will you
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At Lederle Laboratories we're putting research to work. Our Medical Research Division's current projects include development of recombinant proteins as human vaccines, which has created an opportunity for a Protein Chemist to join a group working on isolation and evaluation of recombinant proteins from *E. coli*.

The successful candidate will have a PhD and practical research experience in the analysis of protein structure, protein interactions, denaturation-renaturation, or the stabilization of conformational structure. Experience in or knowledge of immunology would be an asset.

At Lederle, you'll discover a stimulating, highly professional environment in beautiful Rockland County, just 35 miles from New York City. And our highly competitive compensation and benefits package includes a 401K savings plan option.

For prompt and confidential consideration, forward your resume, including salary requirements, to: Mrs. Nancy Levine, Professional Employment Coordinator, Lederle Laboratories, American Cyanamid Company, Medical Research Division, Pear River, New York 10965. An Equal Opportunity Employer m/f.



**Dedicated People
Dedicated to People
Since 1906**

Scientists Renal Pharmacology

The Pharmacology Department of Smith Kline & French Laboratories is seeking associate level scientists to design and conduct laboratory experiments in Renal Pharmacology under limited supervision. More specifically, the individuals should have expertise in: 1) conscious animal physiological/pharmacological techniques or 2) *in vitro* epithelial/membrane transport and short circuit current techniques or 3) radioimmunoassay, ligand binding, and enzyme kinetic techniques.

The successful candidates will:

- assist in planning and conducting of collaborative work with other areas or other scientific personnel.
- work out experimental designs, plan, schedule and conduct experiments.
- assist in compound selection for testing.
- write drafts of scientific reports.
- plan and conduct scientific investigations and interpret results and arrive at conclusions based upon results.
- keep abreast of current literature in the general field as well as that pertaining specifically to assigned projects.
- prepare and present papers at scientific meetings and/or publish papers in scientific journals.

The successful candidates will have:

- a B.S. in the biological sciences plus 5 years experience; or an M.S. in the biological sciences plus 3 years experience in the area(s) of expertise.
- excellent oral and written communication skills.
- demonstrated scientific accomplishment; co-authorship on at least 3 scientific papers published in refereed journals.
- demonstrated ability to work independently.
- no allergies to laboratory animals.
- evidence of supervisory ability.

SmithKline Beckman offers an excellent benefits and compensation program including an attractive relocation package. For confidential consideration, send your C.V. and names of 3 references to: Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1590 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer M/F/H/V.

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POSITIONS OPEN

GEOLOGIST—Tenure-track position, assistant or associate professor, depending upon experience, Ph.D. Must be able to offer graduate level course(s) in sandstone and/or carbonate petrology. Ability to offer undergraduate geochemistry or clay mineralogy desirable. Other duties will include participation in introductory courses. Opportunity for advanced courses in specialty and to teach at summer field Camp. Faculty has seven full-time geologists; there are about 100 undergraduate majors and 60 graduate students (M.S.). Send curriculum vitae and names of three references. Position begins August 1985. Application deadline: 30 May 1985. **Search Committee, Department of Geosciences, Northeast Louisiana University, Monroe, La. 71209.** An Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGISTS/MICROBIOLOGISTS

The Department of Microbiology and Immunology has full-time faculty positions (one tenure track) at the assistant or associate professor level. We are searching for highly qualified individuals able to establish a productive, independent research program. Candidates must have a doctoral degree, postdoctoral experience, and publications in immunology or molecular biology of host pathogen interactions. Successful candidates will also be members of the graduate faculty, and will have responsibility for teaching both graduate and medical students. Currently the department consists of 13 full-time resident faculty members plus several joint and affiliated appointees and operates active doctoral and postdoctoral programs. Numerous opportunities for interdisciplinary interaction and collaboration are available with individuals with mutual interests in the department, the institution, and the Philadelphia area. Send curriculum vitae and names of three references to: **Gerald D. Shockman, Ph.D., Chairman, Department of Microbiology and Immunology, Temple University School of Medicine, Philadelphia Pa. 19140.** Equal Opportunity/Affirmative Action Employer.

LECTURER. The University of Washington invites applications for a full-time lecturer position in the School of Oceanography beginning fall 1985. The appointment as lecturer is a non-tenure-track position, which has special responsibility for teaching introductory courses in oceanography to nonscience students. The school is seeking a person with an advanced degree (master's or Ph.D.) who has demonstrated outstanding teaching capabilities and who wishes an opportunity to teach at a major academic institution. The successful applicant will be responsible for teaching and coordinating introductory oceanography courses, and developing enthusiastic student interest in the science of oceanography and in the societal impacts of man's use of the seas.

Applicants are requested to send curriculum vitae and the names of four references to: **Brian T. R. Lewis, Director, School of Oceanography, WB-10, University of Washington, Seattle, Wash. 98195.** Telephone: 206-543-6487. The closing date for applications is 1 July 1985. Ad number 852.

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

MICROBIOLOGIST—Multiyear, renewable contract position available for Ph.D., D.O., or M.D. to perform RESEARCH, seek outside support and teach part of medical microbiology course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae, and all supportive evidence (current grant support and grant track record and teaching experience) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

MOLECULAR BIOLOGIST

We seek to recruit an outstanding individual to join a multidisciplinary group studying cell regulation. The successful candidate, who will be skilled at isolation, analysis, and expression of recombinant eukaryotic genes, will have the opportunity to participate in ongoing projects and will be expected to develop an independent research program. The position, which can be filled at either the senior fellow or junior faculty level, will be supported for a minimum of 2 years. Interested individuals should send curriculum vitae and the names of three referees to: **Box 111, SCIENCE.** Affirmative Action/Equal Opportunity Employer.

SCIENTISTS

Creative BioMolecules, Inc. is a research and development company involved in production of proteins using recombinant DNA technologies. The company is expanding its technical base and has opportunities for enterprising and well-qualified individuals with experience in one or more of the following research areas:

- **Molecular Biology**
- **Microbial Genetics**
- **Process Engineering**

Applicants for these positions should have post-doctoral experience and demonstrated capacity to carry research project responsibilities.

Creative BioMolecules offers competitive salaries and benefits plan and the opportunity to make a significant contribution to our research program.

Interested individuals may apply by sending a resume to:



Personnel Director
Creative BioMolecules, Inc.
35 South Street
Hopkinton, MA 01748

CREATIVE BIOMOLECULES

POSTDOCTORAL RESEARCH POSITIONS LA JOLLA CANCER RESEARCH FOUNDATION

The La Jolla Cancer Research Foundation is a growing research institute located in the Torrey Pines Research Park, in close proximity to the Salk Institute, Scripps Clinic and Research Foundation, and the University of California, San Diego. The Foundation has been designated as a Cancer Center by the National Cancer Institute. The research of the Foundation's staff utilizes molecular, biochemical, and cellular approaches and focuses on the relationships of cancer and mammalian development. Postdoctoral research positions are supported by individual investigators and an NCI postdoctoral training program in Developmental Gene Regulation.

Senior graduate students are encouraged to apply for these positions. For more information, inquiries should be addressed to either individual investigators or to the Director, Postdoctoral Training Program.

Staff Members

Eileen Adamson, Ph.D., Staff Scientist
 Expression of oncogenes and growth factor receptors during development; differentiation of teratocarcinoma cells.

Eva Engvall, Ph.D., Staff Scientist
 Composition, structure and function of basement membranes and extracellular matrices.

William Fishman, Ph.D., President, Staff Scientist
 Tumor marker studies: Placental genes operating in cancer cells.

Frank Fujimura, Ph.D., Assistant Staff Scientist
 Viruses and teratocarcinoma differentiation.

Michiko Fukuda, Ph.D., Assistant Staff Scientist
 Biochemistry of cell surface glycoconjugates.

Minoru Fukuda, Ph.D., Staff Scientist
 Cell surface glycoproteins in differentiation and oncogenesis.

Terumi Kohwi-Shigematsu, Ph.D., Assistant Staff Scientist
 Chromatin structure and mechanisms of chemical carcinogenesis.

Richard Maki, Ph.D., Staff Scientist
 Genes involved in the immune response.

Elizabeth Mather, Ph.D., Assistant Staff Scientist
 Regulation of IgD expression during B lymphocyte differentiation.

Robert Oshima, Ph.D., Staff Scientist
 Postdoctoral Training Program Director
 Early developmental regulation of cytoskeletal proteins.

Magnus Pfahl, Ph.D., Staff Scientist
 Mechanism of gene regulation in prokaryotic and eukaryotic systems.

Michael Pierschbacher, Ph.D., Assistant Staff Scientist
 Lymphocyte adhesion molecules.

William Raschke, Ph.D., Staff Scientist
 Molecular analysis of lymphocyte differentiation.

Eikki Ruoslahti, M.D., Scientific Director
 Staff Scientist
 Extracellular Matrix Program Director
 Structure and function of cell adhesion molecules in extracellular matrices.

William Stallcup, Ph.D., Staff Scientist
 Development of the nervous system.

LA JOLLA CANCER RESEARCH FOUNDATION
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- Monoclonal Antibodies for the diagnosis and treatment of human cancer
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- Hormones and their Receptors

OPPORTUNITIES

Ph.D's with expertise in:

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- Gene Cloning & Sequencing
- Eukaryotic Expression Systems
- Ligand-Receptor Interactions
- Assay Development

REWARDS

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- Attractive benefits
- Stimulating research environment
- Geographically desirable location

Please send resume to:

Sheryl J. Hackman

ONCOGEN

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 Seattle, WA 98121

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POSITIONS OPEN

MARINE BIOLOGIST/ASSISTANT DIRECTOR. The Bamfield Marine Station invites applications for a 1- or 2-year *nonrenewable* position as assistant director. Ph.D. required. Salary commensurate with experience. The successful applicant will be expected to perform administrative and/or teaching duties, and pursue an active research program of own choosing at the station. The station is operated by five western Canadian universities and is located on the outer coast of British Columbia. The position is available starting 1 October 1985, pending final approval of funding. Curriculum vitae, statement of research interests and objectives, and names of three references should be sent by 31 May to: **Dr. R. E. Foreman, Director, Bamfield Marine Station, Bamfield, British Columbia, Canada V0R 1B0. Telephone: 604-728-3301. Canadian citizens and permanent residents will be given preference per Canadian regulations.**

MESOZOIC PALYNOLOGIST

The U.S. Geological Survey (USGS), Geological Division, Branch of Paleontology and Stratigraphy, announces a vacancy for research geologist in Mesozoic palynology. Duties include conduct of biostratigraphic investigations and original research on fossil palynomorphs, with emphasis on the U.S. Atlantic and Gulf coastal plains. Position is to be located at USGS National Center, Reston, Virginia. Applicants should be U.S. citizens. Position salary and grade negotiable based on career experience (salary range \$31,619 to \$67,940 per annum, GS-12 to GS-15). For further information, contact: **T. A. Ager, 970 National Center, U.S. Geological Survey, Reston, Virginia 22092; telephone: 703-860-7745.**

Application must include Standard Form 171 (SF-171), Personal Qualifications Statement, available from above address or any federal personnel office. Application must be received by T. A. Ager by 15 July 1985. *The USGS is an Equal Opportunity Employer.*

MOLECULAR BIOLOGIST

Applications for an assistant professorship are invited from individuals with a major commitment toward research and whose interests are in the structure, regulation, or expression of viral, or mammalian, genes. Expertise in genetic engineering or enzymology-protein chemistry, is an asset. Knowledge of, or readiness to learn, French essential. Send applications to: **Dr. Pierre Bourgaux, Directeur, Département de Microbiologie, Faculté de Médecine, Centre Hospitalier Universitaire, Université de Sherbrooke, Sherbrooke, Québec, Canada J1H 5N4.**

MOLECULAR AND CELLULAR IMMUNOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY

The Department of Microbiology and Immunology at the University of California, Berkeley, is seeking highly qualified applicants to fill a faculty position at the assistant professor level beginning 1 July 1986. Applicants should hold a Ph.D. or M.D. degree and have a strong record of scholarly achievement and outstanding research contributions. Responsibilities include development of a graduate-level course in molecular aspects of cellular immunology, participation in undergraduate instruction in immunology, and maintenance of a strong independent research program to provide training for graduate students and postdoctoral fellows. Preference will be given to candidates whose major research interest involved molecular mechanisms of cellular immunobiology.

Please send curriculum vitae, summary of research interest, and the names of three references by 15 July 1985 to:

**Dr. James P. Allison
Chairman, Search Committee
Department of Microbiology and Immunology
University of California
Berkeley, Calif. 94720**

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

NEUROBIOLOGIST. Postdoctoral fellow to work on the development and application of optical methods of investigating the regional properties of neurons [for voltage-sensitive dyes, see: *J. Neurosci.* 4, 659, 673; for calcium indicators, see: *Nature* 309, 266]. Position available September 1985. Send résumé and one letter of reference to: **Dr. William Ross, Department of Physiology, New York Medical College, Valhalla, N.Y. 10595.**

POSITIONS OPEN

The Department of Biology and the Rosenstiel Research Center of Brandeis University invite applications from **MOLECULAR IMMUNOLOGISTS** for a faculty position at the associate or full professor level. Applicants must have a strong record of independent research contributions in immunology that includes work in molecular genetics. Excellence in teaching is also expected. Send curriculum vitae, a short description of accomplished and planned research, and names of three references to: **Dr. Alfred Nisonoff, Rosenstiel Center, Brandeis University, Waltham, Mass. 02254.** Deadline for application is 1 August 1985. *Brandeis University is an Equal Opportunity/Affirmative Action Employer.*

Position available for a recent Ph.D. graduate in **NEUROPHARMACOLOGY/NEUROSCIENCE.** Successful candidate should have experience either with neurochemistry of opiate or monoaminergic neuronal processes or have training in nociceptive test paradigms and microinjection techniques into brain sites or the intrathecal space of rats. Individual must be willing to participate with an interdisciplinary team studying the pharmacology of supraspinal and spinal mechanisms involved in antinociceptive drug action. Contact: **David J. Smith, Ph.D., Professor of Anesthesiology and Pharmacology, Department of Anesthesiology, West Virginia University Medical Center, Morgantown, W.Va. 26506.** Deadline for submitting application is 31 May 1985. Send curriculum vitae and statement of research interests. Position is currently available. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

PHARMACOLOGIST—Multi-year, renewable contract position available for Ph.D., D.O., or M.D. to perform **RESEARCH**, seek outside support and teach part of medical pharmacology course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae and all supportive evidence (current grant support and grant track record and teaching experience) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

PHYSIOLOGICAL ECOLOGIST with background in the botanical sciences. Assistant professor position available August 1985. Responsibilities in the first year include two courses in ecology, one basic and one advanced, and a third course in the applicant's specialty. The successful candidate will also supervise undergraduate research projects. Ph.D. required; *women and minorities are encouraged to apply.* Send curriculum vitae, undergraduate and graduate transcripts, and three letters of reference to: **Dr. Robert Chase, Chairman, Search Committee, Department of Biology, LAFAYETTE COLLEGE, Easton, Pa. 18042.**

PLANT PHYSIOLOGIST (5-year term appointment with the possibility of promotion to staff senior scientist). The Chemical Biodynamics Division is seeking a plant physiologist or biochemist to join and complement an existing program studying the organization and control of genes coding for photosynthetic components in plant cells. Responsibilities include organizing and operating a plant cell culture laboratory. This position requires experience in plant cell culture techniques, propagation of plants from protoplasts, and identification of plant gene products. Prefer a Ph.D. in related field. Send two copies of your résumé to: **Lawrence Berkeley Laboratory, 1 Cyclotron Road, Employment Office 90-1042, Berkeley, Calif. 94720.** *An Equal Opportunity Employer, M/F/H.* Please specify Job Number A/3367.

POSTDOCTORAL POSITION

Recently formed multidisciplinary group with stable long-term funding seeks Ph.D. or M.D. to participate in studies of the role of **DNA topoisomerase** in tumor biology and **cancer chemotherapy.** Investigations at the molecular/cellular level will be coordinated with those examining the basis for tumor responsiveness to established and newly synthesized topoisomerase-mediated anticancer drugs. Salary negotiable. Send curriculum vitae, three references, and brief statement of research interests and experience to: **Warren Ross, M.D., or Tom Rowe, Ph.D., Box J-267, JHMHC, University of Florida, Gainesville, Fla. 32610.**

POSITIONS OPEN

Applications are invited for 1- to 2-year **POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITION IN PHARMACOLOGY.** The successful applicant will use cultured vascular cells in a study of the interactions of prostaglandins and cyclic nucleotides as they relate to vascular function. Experience in cell culture and vascular biology is desirable but not essential. Send résumé and at least two letters of reference to: **Dr. Aviv Hassid, Department of Pharmacology, University of Tennessee Center for Health Sciences, Memphis, Tenn. 38163.**

THE UNIVERSITY OF SYDNEY POSTDOCTORAL FELLOW Reference Number 16/10 SCHOOL OF BIOLOGICAL SCIENCES (BIOPHYSICS LABORATORY)

For research in plant electrophysiology. Experience in patch-clamp and/or perfusion techniques an advantage. A Ph.D. in relevant area is required. Appointment is for 2 years.

Salary range: A\$21,411 to \$23,903 per annum (under review).

The University reserves the right not to proceed with any appointment for financial or other reasons.

Applications, quoting reference number, including curriculum vitae and the names and addresses of three referees, to: **The Registrar, University of Sydney, New South Wales 2006, Australia,** by 7 June 1985.

POSTDOCTORAL FELLOW

Required to work in area of human thyroid autoimmunity with emphasis on T-cell cloning. Opportunity for independent work and career development. Prefer individual with T-cell background, marine or human. Position available summer 1985. Send résumé to: **Dr. T. F. Davies, MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY AND NEUROTOXICOLOGY

An immediate opportunity for a postdoctoral research position is available in developmental neurobiology and neurotoxicology. The research includes development and differentiation of macroglial cell types, microglial cells and their reaction to injury. The laboratories are also engaged in the study of the effects of heavy metals on growth and development of the CNS. Backgrounds in immunology, immunocytochemistry isolation and characterization of proteins and biomembranes, cell cultures, and basic morphological techniques will be helpful. Send curriculum vitae and names of references to: **Dr. Ben H. Choi, Division of Neuropathology, Department of Pathology, University of California, Irvine, Irvine, California 92717.** *An Affirmative Action/Equal Opportunity Employer.* Deadline: 24 June 1985.

POSTDOCTORAL POSITION, available after 1 October. Cell biology-physiology-biochemistry laboratory studying isolated cardiac membrane channel proteins seeks immunologist for immunofluorescence and immunoelectron microscopic investigations. Applicant should have doctorate and experience with poly- and monoclonal antibody techniques. Send curriculum vitae, description of research interests, and references to: **Dr. Ernest Page, Department of Medicine, BH Box 137, The University of Chicago, 5841 South Maryland Avenue, Chicago, Illinois 60637.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available to study oncogene suppressors in human cells. Strong background in molecular biology preferred. Applicants should send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Noel Bouck, Department of Microbiology/Immunology, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Ill. 60611.**

POSTDOCTORAL POSITION. Limnologist, with interest in tropical rivers or floodplain lakes, to work at South American field site for 1 year beginning 1 July 1985. Some knowledge of Spanish preferred. Specialization open. Send résumé and names of references to: **Dr. William M. Lewis, Jr., Department of E.P.O. Biology, Campus Box 334, University of Colorado, Boulder, Colo. 80309.** *University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

VETERINARIAN

ASSOCIATE UNIVERSITY VETERINARIAN

Under the guidance of the University Veterinarian, participates in developing, implementing and maintaining animal care standards and policies to maximize University research and teaching programs.

Requires a D.V.M. from an approved veterinary college, plus completion of a training program in laboratory animal medicine. Must be licensed in at least one state in the United States, preferably New Jersey, and be Board Certified (or eligible) in clinical laboratory animal medicine. Requires several years of experience in clinical laboratory animal medicine. Familiarity with federal agencies is desirable.

Excellent benefits package includes tuition remission for employee and children. Send resume and salary history, indicating position number 179, to:

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

Division of Personnel Services
New Brunswick, NJ 08903

*An Affirmative Action/
Equal Opportunity Employer*

POST DOCTORAL BIOCHEMIST Department of Allergy & Inflammation

A post doctoral position is immediately available for a recent PhD in Biochemistry, Molecular Biology or Biology to join the Biochemistry Section of the Allergy & Inflammation Department. Research concentrates on various aspects of phospholipid and arachidonic acid metabolisms. The successful candidate will study protein kinase C in relation to its regulation and biological significance in this area. The individual should have recent experience in enzymology and cellular regulatory mechanisms.

Please send resume in complete confidence to: Mr. Louis DeMartino, Schering-Plough Corporation, Box TM 85-5, 60 Orange Street, Bloomfield, New Jersey 07003. We are an equal opportunity employer m/f.

 Schering-Plough

BIOCHEMICAL TOXICOLOGY

Shell Development Company currently has a position available in Toxicology Research at its Westhollow Research Center located in Houston, Texas.

This entry-level laboratory position requires a recent PhD in toxicology, biochemistry, or a closely related field. Training in mammalian toxicology and in biochemical techniques are essential. The qualified individual will function as a study director in the design, conduct, and interpretation of experiments, and will be involved in the evaluation of toxicology data and in program development to assess the biochemical mechanisms and pharmacokinetics of toxicity for selected chemicals. Good communication skills are essential.

Shell offers a competitive salary and excellent benefits. Interested applicants should send a resume, in confidence, to:

RESEARCH RECRUITMENT
Shell Development Company
P.O. Box 1380
Houston, Texas 77001.

Applicants should be a U.S. citizen or have a permanent resident visa.

An Equal Opportunity Employer M/F.



FERMENTATION/MICROBIOLOGY RESEARCH

Stauffer Chemical Company has two openings in its Microbiology/Fermentation Group located in the San Francisco Bay Area.

One position requires a PhD with post-doctoral experience in industrial fermentations from flask to bench scale-up. A background in food microbiology would be helpful.

The second is a support position and requires an MS or BS with general experience in Microbial Physiology or Food Microbiology.

The positions represent an outstanding opportunity for a scientist with the above qualifications to join a dynamic and commercially successful team. In addition to an excellent salary, commensurate with experience, these positions include an outstanding fringe benefit package including relocation assistance, life, health and dental insurance.

Individuals interested in a challenging position conducting original and applied research should submit a description of their research experiences, publications and training along with references to: **H. Sparks, Stauffer Chemical Company, 1200 So. 47th St., Richmond, CA 94804.**

We are an equal opportunity employer, M/F.

Stauffer
CHEMICALS

POSITIONS OPEN

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE

The Research Laboratory of Saint Francis Hospital and Medical Center, a 700-bed, University of Connecticut-affiliated hospital in Hartford, Connecticut, is seeking a candidate to work on the regulation of bone formation in vitro and the purification and development of assays for bone-derived growth factors. Experience in molecular biology, biochemistry, and monoclonal antibodies preferable. Forward résumé to:

Ernesto Canalis, M.D.
Director of Research Laboratory
Saint Francis Hospital and Medical Center
114 Woodland Street
Hartford, Connecticut 06105
Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately to study cholesterol in membranes and cells and/or functional consequences of membrane structure. Send curriculum vitae and three letters of reference to: **Dr. Philip L. Yeagle, Department of Biochemistry, State University of New York (SUNY) Buffalo School of Medicine, Buffalo, N.Y. 14214.** *SUNY/Bufalo is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION is available to work on aluminum toxicity in plants using Al^{13} and autoradiography as tools. Candidate must have experience in plant anatomy and physiology. Two-year term beginning fall 1985. Salary: \$16,000 per annum. Send curriculum vitae, including references, to: **Dr. H. B. Tepper, Department of Environmental and Forest Biology, State University of New York, College of Environmental Science and Forestry, Syracuse, N.Y. 13210,** by 31 July 1985. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION AVAILABLE

Biochemistry or neurochemistry—To study cationic ATPase activities in inherited neurological diseases and tumors. Experience in enzymology desirable. Available for August or September 1985. Send curriculum vitae and the names of three references to:

Dr. Thomas N. Seyfried
Department of Biology
Boston College
Chestnut Hill, Mass. 02167

POSTDOCTORAL POSITION

A postdoctoral position (funded by a 3-year NSF grant) is available beginning 1 July to study the role of $\beta(1-3)$ glucan synthase activity in morphogenesis of *Neurospora crassa*. Experience in enzymology and/or genetics is necessary. Send curriculum vitae and the names of three references to: **Claude P. Selitrennikoff, B-111, University of Colorado Health Sciences Center (UCHSC), Denver, Colorado 80262.** *UCHSC is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study humoral and cell-mediated immunity to enteric viral infections of animals. Salary range is \$22,000 to \$26,000. Send curriculum vitae and three references to: **Dr. Linda Saif, Food Animal Health Research Program, Ohio State University, Ohio Agricultural Research and Development Center, Wooster, Ohio 44691.**

POSTDOCTORAL POSITION for research on transgenic animals. Work includes microinjection of genes into eggs, embryo transfer, and development of transgenic mouse lines expressing new gene constructions. Apply with curriculum vitae to: **R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.**

POSTDOCTORAL POSITION available immediately to study regulation and function of ornithine decarboxylase. This enzyme is modulated by hormones, mitogens, tumor promoters, and oncogenic transformation. We have recently generated mutant cell lines [J. Biol. Chem. 258, 8384 (1983); J. Biol. Chem. 258, 12083 (1983)] and cloned probes [PNAS 81, 540 (1984); J. Biol. Chem. 260, 2941 (1985)] that have made the enzyme accessible to study. Applicants should have cell and molecular biology experience. Send curriculum vitae, description of training plans, and the names of three references to: **Dr. Philip Coffino, Department of Microbiology, University of California, San Francisco, California 94143.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION

Postdoctoral position available to conduct research on the molecular genetics and cloning of CNS myelin proteins. Current emphasis is on human studies of myelin basic protein and disorders of myelin. Experience in molecular biology and recombinant DNA techniques is required. Some additional background in neurobiology preferred. Candidates must have a Ph.D. or M.D. degree and be U.S. citizens or permanent residents. Send curriculum vitae and three letters of reference to: **Dr. Stanley Prusiner, Department of Neurology, HSE 781, University of California, San Francisco, Calif. 94143.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH, PLANT MOLECULAR BIOLOGY. Postdoctoral position in gene transfer and expression in higher plants. Send curriculum vitae and three letters to:

Dr. Gynheung An
Institute of Biological Chemistry
Washington State University
Pullman, Wash. 99164-6340

OLD DOMINION UNIVERSITY

POSTDOCTORAL RESEARCH ASSOCIATE. To participate in studies of pheromones of ticks, primarily sex pheromones, including behavioral investigations, extraction and characterization of pheromones, effects of neurotransmitters and hormones, localization of receptor sites, and pheromone biosynthesis. Successful candidate will be a Ph.D. with strong background in insect or invertebrate physiology and biochemistry, with proficiency in advanced HPLC, GC, gel electrophoresis, and other separations techniques. Experience with radioimmunoassay desirable. Full-time position with annual salary starting at \$20,000, renewable for up to 3 years. Available 1 August 1985. Interested applicants submit curriculum vitae and names of referees by 1 July 1985 to: **Dr. Daniel E. Sonenshine, Department of Biological Sciences, Old Dominion University, Norfolk, Va. 23508. Telephone: 804-440-3595 or 3612.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

POSTDOCTORAL RESEARCH ASSOCIATE to study processing enzymes of atrial peptides and of transforming growth factor. Also, molecular cloning of angiotensin converting enzyme. Send curriculum vitae, including names of three references, to: **Dr. Robert B. Harris, University of Colorado, Department of Chemistry, Box 215, Boulder, Colo. 80309.**

POSTDOCTORAL RESEARCH ASSOCIATE position available fall 1985 for studies of membrane adhesion and fusion in both model and biological membrane systems. Background in biochemistry, biophysics, and chemistry preferred, but other areas are also welcome. Send curriculum vitae and three letters of reference to:

Dr. Shinpei Ohki
Department of Biophysical Sciences
State University of New York at Buffalo
224 Cary Hall
Buffalo, N.Y. 14214

POSTDOCTORAL RESEARCH POSITION is available in endocrinology, metabolism, hormone action, and phospholipid metabolism. Contact: **Robert V. Farese, M.D., Associate Chief of Staff for Research and Development (151), James A. Haley Veterans Hospital, 13000 North 30 Street, Tampa, Florida 33612. Telephone: 813-972-2000, extension 566.** A federal position—U.S. citizenship required. *An Equal Opportunity Employer.*

OLD DOMINION UNIVERSITY

PREDOCTORAL RESEARCH ASSISTANT. To participate in studies on sex pheromones of ixodid ticks, including extraction, characterization, bioassay of chemically defined fractions, and behavioral investigations. M.S. preferred. Applicant should be proficient in biochemical techniques. Programs available leading to Ph.D. in biomedical sciences or ecological sciences. Stipend \$8500 per annum and waiver of tuition. Available 1 August 1985. Interested applicants send curriculum vitae and names of three referees by 1 July 1985 to: **Dr. Daniel E. Sonenshine, Department of Biological Sciences, Old Dominion University, Norfolk, Va. 23508. Telephone: 804-440-3595 or 3612.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

Two positions are available: (i) Molecular basis of interferons' antitumor activity; and (ii) chemical-viral carcinogenesis. Experience in biochemistry, cell biology, nucleic acid chemistry, and gene cloning desirable. Send curriculum vitae and names of three references to: **Dr. P. B. Fisher, Department of Microbiology, Columbia University, College of Physicians and Surgeons, New York, N.Y. 10032.** *Affirmative Action/Equal Opportunity Employer.*

PRESIDENT—EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES

Qualifications: knowledge of U.S. and internal medical education, administrative experience in U.S. graduate medical education, demonstrated leadership, understanding of principles of testing of medical knowledge. Responsibilities: chief executive officer, administer programs, develop and maintain effective relationships with medical educational institutions in United States and abroad, foundations, U.S. and foreign government agencies, and other organizations with interests in internal medicine. Address inquiries and applications to: **Madison B. Brown, M.D., Chairman, ECFMG Board of Trustees, P.O. Box 8266, Philadelphia, Pa. 19101-8266.** *Equal Opportunity Employer.*

RESEARCH ASSOCIATE PLANT TISSUE CULTURE

The Tissue Culture for Crops Project (TCCP) at Colorado State University is seeking a **network director** to develop and administer the International Plant Biotechnology Network. The position will involve approximately 8 weeks of travel each year to tissue culture laboratories in developing countries. The successful candidate should possess at least a master's degree in botany or related field and have at least 1 year of experience in tissue culture research.

Application deadline: 7 June 1985. Position available immediately. Salary: \$25,000 plus benefits. Send curriculum vitae and three letters of recommendation to:

Dr. Murray W. Nabors, Director
Tissue Culture for Crops Project
Department of Botany
Colorado State University
Fort Collins, Colo. 80523

RESEARCH ENGINEER MATERIALS SCIENTIST

Conduct scientific studies into the synthesis and structure property relationship on metallic and semiconducting thin films. Demonstrated ability to work with high-vacuum systems and sophisticated analytical instruments. Must have a thorough knowledge of thin-film deposition processes as well as solid-state physics. Ph.D. in materials science/physics and strong research background as evidenced by publications are required. Salary: \$23,000 per academic year. Please reply to: **R. Bunshah, Professor of Engineering, Department of Materials Science and Engineering, 6532 Boelter Hall, Los Angeles, Calif. 90024.**

VETERINARY PATHOLOGIST

The Department of Pathology, New York State College of Veterinary Medicine, is offering a tenure-track faculty position in veterinary pathology. Responsibilities will include participation in core curriculum teaching for veterinary students, rotational assignment to diagnostic pathology services, development of independent and collaborative research programs in experimental pathology, and supervision of post D.V.M. graduate students.

Preference will be given to candidates possessing specialty Board-certification by the American College of Veterinary Pathologists and a demonstrated research background in toxicologic pathology or chemical carcinogenesis. Academic rank and salary will be commensurate with background and experience.

Appointment will be available 1 August 1985. Candidates should submit curriculum vitae, five letters of reference, and a statement of career goals to: **Robert M. Lewis, D.V.M., Chairman, Department of Pathology, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.**

Cornell University is an Equal Opportunity Employer/Educator.

VICE PRESIDENT FOR RESEARCH THE UNIVERSITY OF GEORGIA

The University of Georgia invites nominations and applications for the position of Vice President for Research.

Located in Athens, Georgia, The University of Georgia is the nation's oldest chartered state university. The University ranks among the top 50 research institutions in the country and operates with annual research expenditures in excess of \$80 million across its 13 schools and colleges.

The Vice President for Research will administer the University's research resources, serve as an executive officer of the University, and report to the President. He/she will facilitate and coordinate a vigorous expansion of competitively-funded research programs, and seek new avenues for creative partnerships with the private sector and government agencies. She/he will exert strong leadership in the organization and funding of new, interdisciplinary research programs, and will formulate reward and incentive systems for faculty participation in sponsored research.

Nominees/applicants should have a record of executive-level accomplishments, knowledge of current R&D environments encompassing national and international perspectives in private, public, and governmental sectors, and should possess a working knowledge of higher education, including the nature and scope of university research activities. Candidates should have the terminal degree or equivalent experience in their discipline, and credentials suitable for appointment at the level of Professor in the University.

Nominations should include the nominee's address and telephone number. Applications should include a letter of interest, a curriculum vitae, and the names and addresses of 5 persons who can serve as references. The closing date for receipt of completed applications is **July 15, 1985**. The position may be occupied as early as January 1, 1986.

Address all nominations and applications to:

Vice President for Research Search Committee
c/o Dr. Luis M. Proenza
Office of the President
The University of Georgia
Athens, Georgia 30602

The University of Georgia is an
Equal Opportunity/Affirmative Action Employer



POSTDOCTORAL ASSOCIATE POSITIONS UNIVERSITY OF IOWA

Please contact the appropriate department to express your specific interest:

ANATOMY—Dr. J. D. Coulter, Professor and Head, Bowen Science Building.

ANESTHESIA—John H. Tinker, M.D., Professor and Head. Openings available in all research subspecialties.

BIOCHEMISTRY—Dr. Charles Swenson, Bowen Science Building.

DERMATOLOGY—John S. Strauss, M.D., Professor and Head, or Kenzo Sato, M.D., Associate Professor, Boyd Tower, General Hospital. A postdoctoral research associate for the study of electrophysiology of cultured cells.

INTERNAL MEDICINE—Openings available in all disciplines in the Internal Medicine Department, College of Medicine, University of Iowa. Contact: Francois M. Abboud, M.D., Professor and Head, or Darris Goerdt, Administrator, Telephone: 319-356-2850.

MICROBIOLOGY—Dr. Irving P. Crawford, Professor and Head, Bowen Science Building. Research in microbial genetics and physiology, as well as mammalian virology.

PATHOLOGY—Dr. Richard G. Lynch, Professor and Chairman, 144 Medical Laboratories. Research activity in all areas of experimental pathology.

PHARMACOLOGY—Dr. P. Michael Conn, Chairman and Head, Bowen Science Building. Openings available in all areas of pharmacology and toxicology.

PHYSIOLOGY AND BIOPHYSICS—Research opportunities in molecular and cellular physiology and biophysics with emphasis in endocrinology, membrane biology, and neurophysiology. Contact: Robert E. Fellows, M.D., Ph.D., Professor and Head, 5-660 Bowen Science Building. Telephone: 319-353-4600.

RADIATION BIOLOGY—Dr. J. William Osborne, Professor and Director, 14 Medical Laboratories. Biological effects of radiation; environmental carcinogenesis and immunology; free radicals and cancer; cell proliferation in hematological and gastrointestinal systems. Postdoctoral Fellows also.

SURGERY—Dr. Robert J. Corry, Professor and Head, Colloton Pavilion. Research opportunity in organ transplantation.

The College of Medicine, University of Iowa, Iowa City, Iowa 52242, is an Equal Opportunity/Affirmative Action Employer.

SPECIAL EXPERT NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE

The Laboratory of Behavioral and Neurological Toxicology, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina invites applications for a position of Special Expert in the Neuropharmacology Section. The incumbent will be responsible for designing and conducting laboratory experiments concerning the regulation of neuropeptides in the central nervous system by psychoactive compounds. This position requires a Ph.D. degree or the equivalent training and experience in neuropharmacology or neurochemistry, or a related area, and proven research productivity in peptides research and interest in applying molecular biological techniques such as cell free translation or blot hybridization to study the biosynthesis of peptides. An individual must have the same level of qualifications as required for the GS-13 grade level (\$37,599) in the Federal Government. This is a non-tenured position, lasting two (2) years with extension possible for the talented researcher.

Please submit curriculum vitae, bibliography and three recommendations to:

NIEHS Personnel Office
Bruce Wiggins (HN-V27)
P.O. Box 12233
Research Triangle Park, NC 27709

NIEHS is an Equal Opportunity Employer; women and minorities are encouraged to apply.

Postdoctoral Tumor Cell Pharmacology

Smith Kline and French Laboratories, located in suburban Upper Merion, Pennsylvania, is seeking an outstanding individual to join a multidisciplinary research effort investigating the molecular biology of human colon adenocarcinoma. The successful applicant will participate in a joint study between our Departments of Tumor Biology and Molecular Pharmacology to investigate the role of locally released neurotransmitters (adrenergic, cholinergic and peptidergic) in regulating the proliferative capacity and differentiation of normal and neoplastic human colon epithelial cells.

Candidates should have:

- a Ph.D. in Molecular Pharmacology
- experience with receptor binding studies
- 0-3 years postdoctoral experience
- a growing publication record
- clear and concise communication skills

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your CV and names of three references to: Mr. Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1596 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

POSITIONS OPEN

POSTDOCTORAL POSITIONS (TWO) available immediately to join an active research group working in cell and molecular biology related to steroid receptor structure and hormone regulation of gene expression in breast cancer. Interests include: (i) studies of progesterone receptor structure and function using monoclonal antibody and steroid photoaffinity labeling techniques; (ii) studies of receptor interaction with steroid-inducible genes, cloning of receptor-genes, and study of factors regulating receptor-gene regulation; and (iii) mechanisms of steroid hormone action in breast cancer and expression of cell surface tumor antigens using MAb techniques. Applicants should have a recent Ph.D. Experience in protein purification, gel electrophoresis, immunochemistry, molecular cloning, DNA/RNA characterization, or gene transfer is desirable. Interested candidates should submit curriculum vitae and three references to: **Drs. Dean Edwards and Kathryn Horwitz, Department of Pathology (Box B216), University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, Colo. 80262.** *Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSISTANT PROFESSOR DEPARTMENT OF MEDICINE UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

Full-time research faculty to conduct independent and collaborative research in fields relating to hemostasis and thrombosis using cultured vascular cells. Areas of expertise can include biochemistry, microbiology, cell biology, or cell physiology. Applicants must have a Ph.D. degree with demonstrated proficiency in growing vascular endothelial cells in culture. A research grant/career award providing 50 percent of annual salary desirable but not essential. Qualified and interested candidates should send curriculum vitae, names and addresses of three references, and brief outline of research interests by 15 June to: **John C. Hoak, M.D., Department of Medicine, Fletcher House 311, MCHV, Burlington, Vermont 05401.**

An Affirmative Action Employer. Women and minorities encouraged to apply.

RESEARCH FELLOW/RESEARCH ASSOCIATE

The Institute for Advanced Studies in Biological Process Technology of the University of Minnesota has two open positions, one for a **fermentation scientist** with the title **research fellow** or **research associate**; the other position is for a **separation scientist/engineer** with the title **Research Fellow**. The **FERMENTATION POSITION** requires at least an M.S. degree in microbiology, biochemistry, or chemical engineering, 2 to 6 years of experience in industrial pilot scale fermentation equipment, and process control computer experience related to fermentation processes. This position involves management of the technical operation of the institute, along with directing research projects, organization of the research facility, drafting research proposals, and experimental equipment and instrumentation development and evaluation. The **SEPARATION POSITION** requires an M.S. degree in chemical engineering or chemistry with 2 to 6 years of industrial experience in the design/theory/operation of equipment for recovery of cells or proteins or purification of biological molecules. Computer experience in accumulation, analysis, and presentation of experimental data is required; experience in manufacture of human pharmaceuticals is helpful but not required. This position will manage the technical operation of the recovery and purification activities of the institute's central research facility, supervise technical support personnel, and report to the director of the Institute. **To apply by the 31 May deadline**, send a résumé, salary history, and the names of three references to: **Search Committee, Fermentation Position/Separation Position (please indicate which position you are applying for), 240 Gortner Laboratory, University of Minnesota, St. Paul, Minn. 55108.** *The University of Minnesota is An Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH, PLANT MOLECULAR BIOLOGY. Postdoctoral positions in regulation of gene expression in higher plants. Send curriculum vitae and three letters to:

**Dr. Thomas W. Okita
Institute of Biological Chemistry
Washington State University
Pullman, Wash. 99164-6340**

RESEARCH ASSISTANT PROFESSOR, ELECTROPHYSIOLOGY

Research faculty position available at the University of Arizona College of Medicine. Major responsibilities will be development of a research program in myocardial electrophysiology. Candidate will work closely with clinical electrophysiologists. Will have joint appointment in the Department of Medicine and Physiology, and have opportunity to teach in the Department of Physiology. Ph.D. degree and postdoctoral training are prerequisite. Send summary of research plans, curriculum vitae, and names of three references to: **Dr. Frank I. Marcus, Cardiology Section, University of Arizona Health Sciences Center, Tucson, Ariz. 85724**, by 15 July 1985. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST

Performs biochemical engineering techniques to produce therapeutic proteins of significant value. Performs complete purification of proteins in the active and stable form and characterization of therapeutic protein products by biochemical and biophysical techniques, including circular dichroism, UV absorbance, fluorescence spectroscopy, analytical ultracentrifuge sedimentation and analytical gel filtration. Performs duties applying experience and knowledge in protein stability and structure, and effects of solvent components on these properties. Ph.D. biochemistry/biophysics; 4 years of experience, with 1 year in the genetic engineering field, specialty in the biophysics of therapeutic polypeptides; 40-hour week; \$887.50 per week. Job site: Thousand Oaks. Send ad and résumé to **Box 110, SCIENCE**, no later than 31 May 1985.

POSITIONS OPEN

RESEARCH ASSOCIATE IN CYTOGENETICS. Ph.D. with background in mammalian cytogenetics, preferably with experience in high resolution chromosome banding technique, in situ molecular hybridization gene mapping, and/or other molecular genetics techniques associated with chromosome analysis. Candidate will direct research projects involving mechanisms of mutation in mammalian cells, analysis of oncogene activation, and/or gene mapping. Candidate should have good supervisory skills. Research location is on east coast of Florida. Salary range: \$25,000 to \$30,000, depending on experience, with possibility of research faculty appointment. Send résumé, statement of research interests, and addresses of three references to:

**Dr. John Hozier
Medical Genetics Laboratory
Florida Institute of Technology
Melbourne, Florida 32901
Equal Opportunity Employer**

RESEARCH ASSOCIATE

Position available immediately to study the stereochemistry and mechanism of glutathione-dependent enzymes. Some experience in organic synthesis desirable. Salary depending on experience. Send résumé to: **D. J. Creighton, Department of Chemistry, University of Maryland Baltimore County, 5401 Wilkens Avenue, Catonsville, Maryland 21228.** *The University of Maryland Baltimore County is An Equal Opportunity/Affirmative Action Employer. The University encourages qualified women and minorities to apply.*

TECHNICAL DIRECTOR: Direct research program in new techniques of freezing, microsurgically dividing, and sexing cattle/horse embryos. Train technicians in tissue culture mediums/embryo transfers. Ph.D. in reproductive physiology, 4 years of experience in embryo culture, cryobiology, micromanipulation of embryos (including at least 2 years in cattle/horse embryos). Forty hours, 7:30 to 4:30, \$42,000 per year. Send résumé to: **Pennsylvania Job Service Office, 48-50 West Chestnut Street, Lancaster, Pa. 17603.** Order number 3979586.

SENIOR SPECIALIST IN AUTOMATED EDUCATION

This position involves senior level responsibility for the design, development, and testing of advanced hardware and software systems for computer-based education, including the development of large processor architecture and the translation of this into operational hardware. The position will also involve senior level responsibility in the development of software systems for the operation of PLATO on such new, high-speed processor design.

Qualifications

Master's degree plus approximately 10 years of experience or bachelor's degree plus approximately 15 years of experience in large-scale software and hardware system design and development.

Thorough knowledge of CDC 170-730 machine language and the COMPASS assembler.

Familiarity and experience in digital design utilizing emitter-coupled-logic technology.

Familiarity and experience with the PLATO system and TUTOR language is desirable.

Closing date: Full-time, 11-month position starting 21 June 1985. To ensure full consideration, résumé must be received by 1 June 1985. Salary commensurate with achievements and ability.

Contact:

**Dominic Skaperdas
Senior Research Engineer
Computer-based Education Research
Laboratory
University of Illinois
252 Engineering Research Laboratory
103 South Mathews Avenue
Urbana, Ill. 61801
Telephone: 217-333-6556**

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

DIRECTOR MSU/NSTL RESEARCH CENTER MISSISSIPPI STATE UNIVERSITY

Mississippi State University (MSU) invites applications and nominations for the position of director, MSU/NSTL Research Center, at the National Space Technology Laboratories (NSTL), near Bay St. Louis, Mississippi.

Responsibilities include overall management and direction of the center, primarily as an off-campus research facility and also as a graduate education and service extension of MSU; serving as resident liaison to the federal agencies at the NSTL and in the southern coastal zone of Mississippi, and to state and local agencies, businesses, industry, and community organizations in the area; aiding in establishing and expanding funded contract and grant research projects conducted by center staff and MSU faculty to respond to the needs of these several groups; and serving as the center's chief administrator, providing guidance in expanding into appropriate new areas of research, education, and service. The director reports to the Vice President for Graduate Studies and Research.

Preferred qualifications include an earned Ph.D. in one of the sciences or engineering, experience as a principal investigator on research grants and contracts, and administrative experience. Multidisciplinary research experience is desirable. Salary is commensurate with qualifications and experience. Position available after 1 August 1985; the deadline for nominations/applications is 30 June 1985. Forward application materials, including at least three references, to: **Dr. Ralph Powe, Associate Vice President for Research, P.O. Drawer G, Mississippi State University, Mississippi State, Miss. 39762.** Telephone: 601-325-3570.

MSU is an Affirmative Action/Equal Opportunity Employer

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Curriculum vitae to: **Dr. T. M. Brown, Department of Entomology, Clemson University, Clemson, S.C. 29631.**

GRADUATE RESEARCH ASSISTANTSHIPS, 12-month stipends, available in fall 1985 for M.S. or Ph.D. graduate students to work on culture of freshwater shrimp or catfish. Research areas include nutrition, water quality, genetics, larval culture, nursery culture, and pond culture. Contact: **Dale H. Arner, Head, Department of Wildlife and Fisheries, Mississippi State University, P.O. Drawer LW, Mississippi State, Miss. 39762;** telephone: 601-825-3830. *An Equal Opportunity/Affirmative Action Employer.*

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Staff: A. P. Somlyo (director), C. Franzini-Armstrong, T. Frey, J. Haselgrove, J. S. Leigh, L. D. Peachey, A. Scarpa, H. Shuman, and A. V. Somlyo.

Eligibility: U.S. citizens or permanent residents with an M.D. or Ph.D. in basic biological sciences, physics, or chemistry and background in conventional electron microscopy or spectroscopy.

Financial Support: National Heart, Lung and Blood Institute Training Grant.

Application: Send curriculum vitae, bibliography, and two letters of reference to: **A. P. Somlyo, M.D., Pennsylvania Muscle Institute, University of Pennsylvania School of Medicine, B42 Anatomy-Chemistry Building/G3, Philadelphia, Pa. 19104.**

FELLOWSHIPS

MEDICAL ONCOLOGY RESEARCH FELLOWSHIP

Positions available July 1985 for a 3-year fellowship at the Fox Chase Cancer Center. The first year provides extensive clinical management and research experience. The subsequent years are devoted to laboratory research with minimal clinical duties. Laboratory opportunities are available throughout the Center, including the Institute for Cancer Research. General areas of interest include developmental and tumor biology, molecular genetics, viral and clinical carcinogenesis, basic immunology, pharmacology, and MRI spectroscopy. Individuals Board-eligible or -certified in internal medicine who are interested in an academic oncology career should contact: **Robert L. Comis, M.D., Medical Director, Fox Chase Cancer Center, Philadelphia, Pa. 19111.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP. Ph.D. in cell biology or biochemistry desired, beginning September 1985 for 1 to 2 years. Involves ongoing research into hepatocyte processing of peptide hormones. Send curriculum vitae, bibliography, brief description of experience, and names of three references to: **N. F. LaRusso, M.D., Associate Professor of Medicine and Cell Biology, Mayo Medical School, Mayo Clinic and Foundation, Rochester, Minn. 55905.** *An Equal Opportunity/Affirmative Action Institution.*

POST M.D. AND Ph.D. FELLOWSHIPS IN CANCER RESEARCH

The University of Manitoba and the Manitoba Cancer Treatment and Research Foundation have been designated a Terry Fox Training Centre making available a number of postdoctoral research positions. This co-ordinated program is designed to bring together a number of trainees within one cancer centre and to further their research and knowledge in the cancer field. Research areas include biochemistry, cell biology, immunology, medical physics and bioengineering, epidemiology, and general oncology. Inquiries should be addressed to:

**Dr. L. G. Isaacs
Manitoba Cancer Treatment
and Research Foundation
100 Olivia Street
Winnipeg, Manitoba, Canada R3E 0V9
Telephone: 204-787-2241**

POSTDOCTORAL FELLOWSHIP in the area of immunological control of membrane transport. Primary responsibility: production and study of monoclonal antibodies to membrane transport proteins. Position available 1 July 1985; 1-year renewable; salary competitive. Send curriculum vitae and names of three references to: **Dr. Philip Dunham, Department of Biology, Syracuse University, Syracuse, New York 13210.** *Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIPS LIFE SCIENCES RESEARCH FOUNDATION (LSRF)

The LSRF solicits monies from industry, foundations, and individuals to support postdoctoral fellowships in the life sciences. Active solicitation of funds continues for which we need the assistance of all concerned individuals.

Eligibility: Three-year fellowships will be awarded on a competitive basis to graduates with M.D. or Ph.D. degrees in any field of the life sciences. U.S. citizens are eligible to apply with no restrictions on the laboratory of their choice. Foreign applicants are eligible for study in U.S. laboratories. Only research in nonprofit institutions will be supported. Those who are changing their field of research by way of a second postdoctoral or as an independent research associate are encouraged to apply.

Timetable: Application deadline is 1 October 1985, for award as early as summer 1986. Awards will be announced by March 1986.

Address inquiries to: **LSRF, 115 West University Parkway, Baltimore, Md. 21210.**

UNIVERSITY OF WATERLOO DEPARTMENT OF BIOLOGY NSERC UNIVERSITY RESEARCH FELLOWS

The Department of Biology, University of Waterloo, invites applications for NSERC University Research Fellowships in the following areas of research interests: (i) population genetics with emphasis on the genetic structure and dynamics of real as opposed to theoretical populations; and (ii) protein chemistry or biochemistry (including immunology). Applications in other areas will also be given serious consideration. Successful candidates will be expected to establish a vigorous research program and participate in teaching both undergraduate and graduate students. Curriculum vitae, including names of three referees, should be sent to: **Dr. J. E. Thompson, Chairman, Department of Biology, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.** Prospective candidates should examine the NSERC Awards Guide 1985-1986, paragraph 196 on page 54 for details. *In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.*

FELLOWSHIPS

CLINICAL RESEARCH TRAINING FELLOWSHIPS. Harvard Medical School, Department of Psychiatry, Massachusetts Mental Health Center, offers 1- to two-year postdoctoral fellowships to psychiatric residents, other M.D.'s and Ph.D.'s in biological, social, and psychological sciences. Program directors are Robert McCauley, M.D. and Stuart Hauser, M.D., Ph.D. Starting date: 1 July 1986; application deadline: 1 December 1985. Stipends: \$15,996 to \$30,000. Write, indicating area(s) of research interest, to: **Karen Lyon, Box S, Clinical Research Training Program, 74 Fenwood Road, Boston, Mass. 02115.** Telephone: 617-734-0031.

POSTDOCTORAL FELLOWSHIP, summer 1985. Research on musculoskeletal disorders, including growth plate dynamics, osteoporosis, and electrical osteogenesis. Requires knowledge of biomechanics, bone morphometry, and histochemistry. Salary: \$16,000 to \$18,000, depending on experience. Send curriculum vitae to: **Dr. Louis Lippello, Department of Orthopaedic Surgery, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Neb. 68105.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIP

Psychophysics and physiological optics. Two-year fellowship beginning July 1985 or later. Postdoctoral training in color vision and assessment of vision in clinical population. Send curriculum vitae and supporting material to:

**Joel Pokorny, Ph.D.
University of Chicago
Department of Ophthalmology
939 East 57 Street
Chicago, Ill. 60637**

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GRANTS

The March of Dimes Birth Defects Foundation, 1275 Mamaroneck Avenue, White Plains, N.Y. 10605, is accepting grant applications for the support of research in **REPRODUCTIVE HAZARDS IN THE WORKPLACE.** For further information, telephone: **Regina Carroll, Director of Grants Administration at 914-428-7100.**

SYMPOSIA

1 and 2 June, New York City. Theories of Consciousness in the West and East will be explored and experienced in this unique symposium at the Asia Society in New York City. With Shyam Bhatnagar, international authority on Chakra psychology; Frank E. Barr, M.D., researcher of Reissner's Fiber and Melanin; and Arthur Young, Ph.D., inventor of the Bell Helicopter. For informative brochure: **SRI Centre International, Box 2927, Rockefeller Center Station, New York, N.Y. 10185;** telephone: 212-486-1277.

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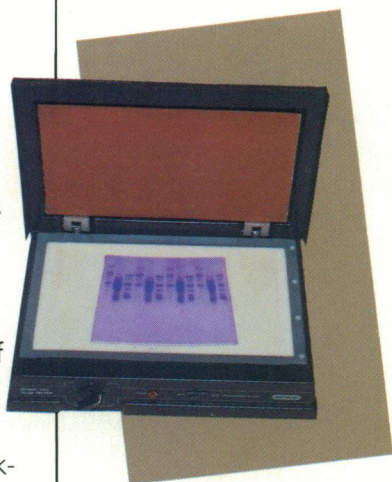


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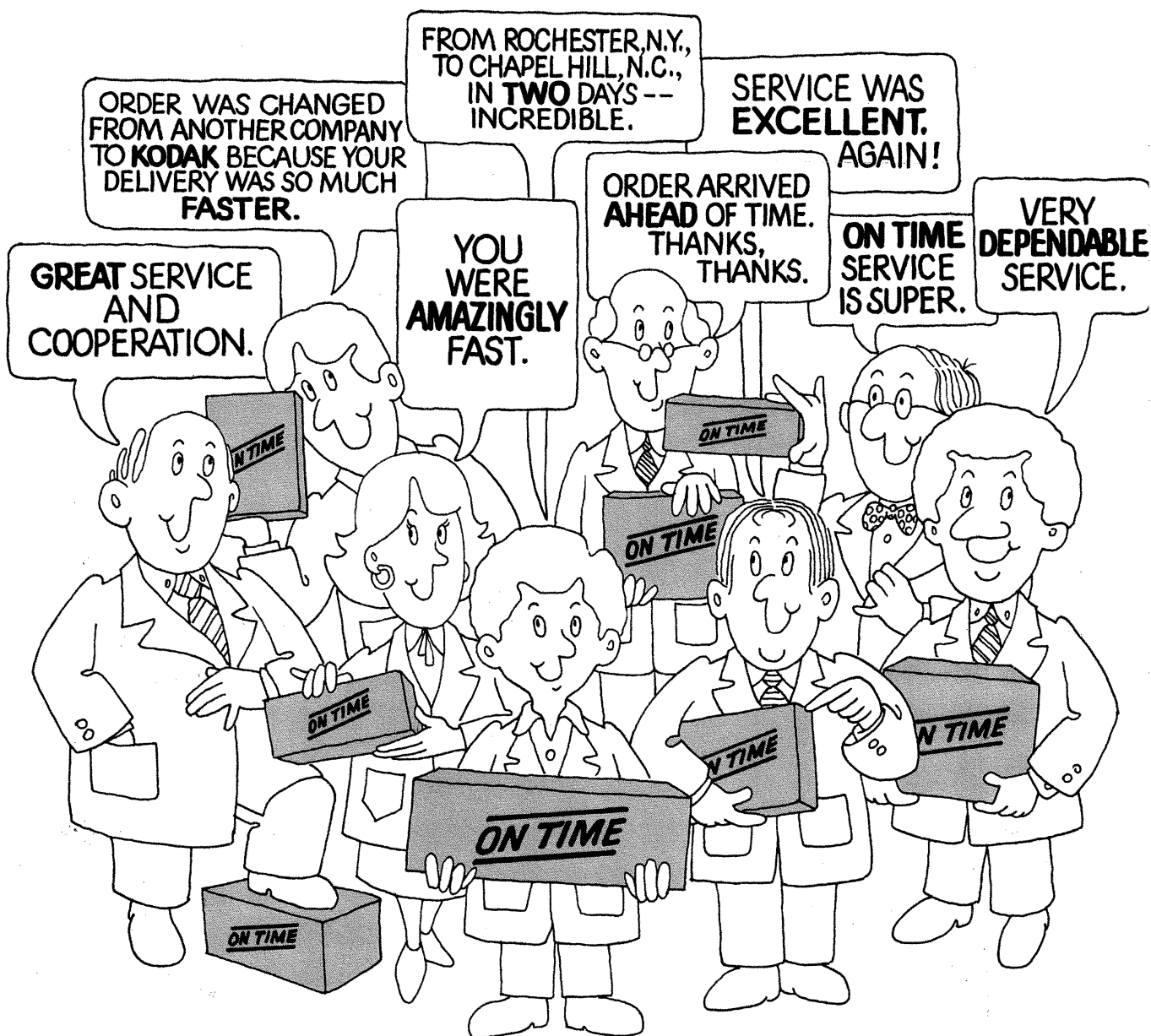
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